

CALIFORNIA UNIVERSITY OF PENNSYLVANIA
CALIFORNIA, PENNSYLVANIA

Department of Health Science & Sport Studies

Graduate Athletic Training Education Program

A. RES 849 - Master's Thesis - 4 credits

Prerequisites: ATE 800 - Research Methods for the Allied Health Sciences
EDP 600 - Statistical Methods

Instructors: Dr. A. Allen, Dr. B. Barnhart, Dr. C. Biddington, Dr. W. Biddington; Dr. R. Hess, Dr. R. Kane, Dr. L. Meyer, Dr. J. Roh, Dr. T. West, Dr. B. Reuter, Dr. R. Wagner

B. Course Objectives:

1. To complete an extended article thesis.
2. To successfully articulate and defend this thesis.
3. To critically evaluate research.
4. To prepare and submit the research for scholarly review.

C. Texts:

1. Arnold BL, Gansneder BM, Perrin DH. *Research Methods in Athletic Training*.. Philadelphia, PA: FA DAVIS; 2005.
2. Cronk BC. *How to Use SPSS*. 4th ed. Los Angeles, CA: Pyrczak Publishing; 2006.
3. Iverson C, Flanagan A, Fontanarosa P, *American Medical Association Manual of Style*. 9th ed. Baltimore, MD: Williams & Wilkins Publishers; 1998.

D. Assessment Activities:

1. Regular meetings with thesis advisor
2. Oral proposal committee meeting
3. Oral thesis committee defense
4. Preparation and submission for presentation/publication

Grading:

A - will reflect the following:

- Extremely well-documented and prepared
- Abstract submitted to thesis advisor, no later than thesis defense, in a format suitable for submission to a recognized professional regional/national presentation/publication
(this will require student to communicate with professor to ensure correct formatting is followed)
- Oral presentation of thesis at scholarship event on campus during spring semester

B - will reflect the following:

- Adequately documented and prepared
- Abstract submitted no later than the thesis defense that is not in submittable format for any recognized professional regional/national presentation/publication
- Oral presentation of thesis at scholarship event on campus during spring semester

C - will reflect the following:

- Document needed considerable advisor and committee editing demonstrating lack of adequate preparation
- Oral presentation of thesis at scholarship event on campus during spring semester

Assignment of plus/minus grades will be indicated by exceptional work within the assigned letter grade (+), or borderline work within the assigned grade (-).

E. RES 849 - Master's Thesis Suggested Course Schedule Overview (specific dates are given each year at the summer graduate orientation meeting)

F.

June	Overview of Thesis and select research topic Start Review of the Literature
July	Meet with Thesis Advisor
September	Form and Meet with Formal Committee
Sept-October	Write Thesis Proposal in Thesis Seminar
Nov-December	Proposal Meeting
Jan-March 15	Complete Thesis (Results and Discussion) Schedule Thesis final defense
March 31	Completion of Oral Defense Submission of Abstract for regional and/or national presentation
April	Preparation for April California University Research Event Preparing document for submitting presentation/publication All pertinent materials, forms, etc. must be completed with the School of Graduate Studies and Research

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INTRODUCTION

- Introduce general area of concern and brief specific review of the literature
- Progress from general area toward eventual problem statement or purpose of the study
- **End with statement of the purpose and research questions**
- Length = 4-5 pages
- Should contain 12-14 references (others will be included from the methods)

METHODS

Introduction (**not titled**) (paragraph listing the following subsections)

Research Design

- a) overview the type of research used (descriptive / qualitative / true experimental / quasi-experimental)
- b) independent/dependent variables
- c) indicate duration of intervention(s) plus frequency of assessing dependent variables
- d) indicate variables you hope to control and how
- e) indicate strengths/limitations of research design

Subjects

- a) number of subjects ($n = ?$) expected, possibly further categorized by age, gender, or other relevant classification variables.
- b) method of sampling, location of subjects, stratification procedures (if any), etc.
- c) unique characteristics of subjects that may influence interpretation of data plus indicate other demographic data (if any) to be collected, also any limitations on subject selection
- d) indicate informed consent will be obtained (if appropriate); indicate physician approval will be obtained (if necessary); include appropriate permission forms as appendices.

Preliminary Research

Experimental Studies

- a) briefly overview pilot research leading toward this proposal including purposed, of this pilot research.
- b) discuss how pilot research facilitates/strengthens this proposal.

Descriptive Studies (correlational)

- c) identify the panel of experts as experts in the area of your research topic (not by name)
- b) their influence on content validity of the survey or questionnaire
- c) identify the need for item analysis of a researcher-developed instrument & testing of a minimum of 30 subjects for creating a reliable instrument

Instruments

- a) list all instruments in the order they will be used (subject information or demographic sheets, laboratory tests, scales, observational systems, questionnaires, etc.)
- b) Indicate which tests will be used to measure which dependent variables.
- c) discuss method of scoring each major variable, and how interpreted.
- d) discuss reliability - external (test-retest), internal consistency, and interrater (if appropriate).
- d) discuss validity of each instrument -- concurrent (convergent), content, predictive, construct validity, where appropriate (reference appropriate studies here)

- e) if you are using unique instrument, describe how it was developed (unless already mentioned in preliminary research section).
- f) include copies of questionnaires and other self-report tests as appendices in the order they will occur for the study.

Procedures

- a) give a detailed step-by-step account (but not numbered list) of the procedures you expect to follow in collecting the data. In other words, visualize what a subject will be asked to do.
- b) discuss any problems you may encounter and what precautions you are prepared to take.
- c) if an experimental study, you may want to subdivide into sections describing: tests and/or training protocol

Hypotheses

- a) indicate what you expect as outcomes in your study, based on your review of literature and your intuitive judgment.
- b) **there should be a hypothesis for each research question as listed (in the same order) at the end of the INTRODUCTION**

Data Analysis

- a) Set alpha level at $\leq .05$
- b) summarize the major descriptive and inferential statistics you expect to use to examine the stated hypotheses.
- c) SPSS 12.0 used for analysis or descriptive statistics computed using SPSS or EXCEL
- c) be prepared to explain these statistical procedures during oral defense.

THE ORAL DEFENSE (can use for proposal/thesis defense)

DO

DON'T

Prior to the Defense

1. Give each member at least 1 week to read proposal.
2. Meet with each member to make sure proposal is worthy of defending.
3. Inform each member of room and time of defense date you scheduled.

1. Avoid only working with advisor on proposal.

Day of Defense

1. Call and remind each member of meeting.
2. Dress professionally.
3. Provide nourishments.

1. expect the document will require few, if any changes.

Oral Presentations

1. Keep short and concise (10-15 minutes).
2. Highlight
 - a) Purposes of project
 - b) How you acquired interest in project.
 - c) Brief overview of methodology and hypotheses.
 - d) Significance of project.
 - e) A few concerns (limitations) that you are seeking committee help on.
3. Can use note cards

1. Avoid 45 minute slide lecture format presentation.
2. Avoid presenting minor details.
3. Avoid reading from proposal/thesis.
4. Avoid excessive discussion (except as related to your hypotheses).
5. Avoid excessive discussion of statistical techniques proposed stats.

Question / Answer Session

1. Answer each question concisely
 2. Seek support of your chair (once in a while).
 3. Be alert to potential conflicts among committee members.
 4. Try to get a consensus on issue.
 5. Be willing to accept alternative approaches.
1. Avoid stalling excessively.
 2. Become defensive, emotional, etc.
 3. Feel you have to agree to everything.
 4. Get hung up on statistical techniques.
 5. Lose site of what you are trying to accomplish in the study (and in the meeting).
 6. Be afraid to say "I don't know."

Summary / Feedback

1. Write each major changes down and seek oral confirmation.
2. Thank each member for their support and time.
3. Collect written comments on proposal/thesis from each committee member.
4. Sit down with your advisor and review meeting plus where you go from there.

F. Accommodations for Students with Disabilities

OSD

October 2004

STUDENTS WITH DISABILITIES

Students with disabilities:

- Reserve the right to decide when to self-identify and when to request accommodations.
- Will register with the Office for Students with Disabilities (OSD) each semester to receive accommodations.
- Might be required to communicate with faculty for accommodations which specifically involve the faculty.
- Will present the OSD Accommodation Approval Notice to faculty when requesting accommodations that involve the faculty.

Office for Students with Disabilities

Requests for approval for reasonable accommodations should be directed to the Office for Students with Disabilities (OSD). Approved accommodations will be recorded on the OSD Accommodation Approval notice and provided to the student. Students are expected to adhere to OSD procedures for self-identifying, providing documentation and requesting accommodations in a timely manner.

Contact Information:

- Location: Azorsky Building – Room 105
- Phone: (724) 938-5781
- Fax: (724) 938-4599
- Email: osdmail@cup.edu
- Web Site: <http://sai.cup.edu/osd>