**PEDU 770**

**Research Methods in Physical Education**

**COURSE SYLLABUS – Spring 2014**

**I. Instructor, Course Description, and Materials**

**Instructor:** Dr. Collin Webster

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Office Hours: T/W – 9:00 AM-12:00 PM, or by appointment

**Location and Time:** BPEC 215 (Pedagogy Lab)

M/W – 2:20 - 3:35 PM

**Credit:** 3 semester hours

**Course Rationale and Description:**

One of the distinguishing characteristics of graduate education is the focus on learning to interpret and conduct research. Many graduate students in physical education and related fields choose to pursue career paths that require, at a minimum, an understanding of the research process, and in some cases, the ability to develop a long-term program of inquiry. This course introduces students to methods of research in physical education/activity, encompassing aspects of study planning, research design, participant sampling, measurement, data analysis, ethics, and reporting. Students are given the opportunity to critique, design, and conduct physical education/activity research.

**Required Textbook and Materials:**

Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2010). *Research methods in physical activity* (6th ed.). Champaign, IL: Human Kinetics.

**Additional Required Readings (in alphabetical order):**

Cothran, D. J., Kulinna, P. H., & Garn, A. C. (2010): Classroom teachers and physical activity integration.

*Teaching and Teacher Education, 26*, 1381-1388.

Donnelly, J. E., Greene, J. L., Gibson, C. A., Smith, B. K., Washburn, R. A….Williams, S. L. (2009). Physical

activity across the curriculum (PAAC): A randomized controlled trial to promote physical activity and diminish overweight and obesity in elementary school children. *Preventive Medicine, 49*(4), 336-341.

Metcalf, B., Henley, W., & Wilkin, T. (2012). Effectiveness of intervention on physical activity of children:

Systematic review and meta-analysis of controlled trials with objectively measured outcomes. *British Medical Journal*. Doi: 10.1136/bmj.e5888

Trost, S. G., Pate, R. R., Sauders, R., Ward, D. S., Dowda, M., & Felton, G. (1997). A prospective study of the

determinants of physical activity in rural fifth-grade children. *Preventive Medicine, 26*, 257-263.

Weaver, R. G., Beets, M. W., Webster, C. & Huberty, J. (2014). System for observing staff promotion of activity

and nutrition (SOSPAN). *Journal of Physical Activity and Health, 11*, 173-185.

Webster, C.A., Caputi, P., Perreault, M., Doan, R., Weaver, G., & Doutis, P. (2013). Elementary classroom

teachers’ adoption of physical activity promotion in the context of a statewide policy: An innovation diffusion and socio-ecologic perspective. *Journal of Teaching in Physical Education, 32*(4), 419-440.

Willenberg, L. J., Ashbolt, R., Holland, D., Gibbs, L., MacDougall, C….Waters, E. (2010). Increasing school

playground physical activity: A mixed methods study combining environmental measures and children’s perspectives. *Journal of Science and Medicine in Sport, 13*(2), 210-216.

**Instructional Methods and Activities:**

This course is delivered in a seminar format. Instructor-led presentations, class discussion, and collaborative engagement in research will be the dominant instructional methods used. Activities will focus on reviewing, synthesizing, and applying content from the required readings.

**II. Course Objectives and Assessment of Learning**

**Major Course Objectives:**

At the completion of this semester, each student should be able to:

1. Correctly interpret the information presented in Methods sections of a representative range of quantitative, qualitative, and mixed methods research articles in physical education/activity.
2. Insightfully critique the methods used in a sample of quantitative, qualitative, and mixed methods research studies in physical education/activity.
3. Design a rigorous research study in physical education/activity.
4. Meaningfully contribute to a collaborative research project in physical education/activity.

**Assessment of Learning:**

Reading Summaries

Students will be asked to summarize (~1-2 typed pages) each assigned reading (see page 5). Summaries should be submitted in class.

Research Proposal

Students will be given the opportunity to write a research proposal (~10-15 pages) and present the proposal to the class (see page 6). The proposal will be due on **Wednesday, April 23rd**.

Collaborative Research Study

Students will be given the opportunity to meaningfully contribute to a collaborative research study (see page 7). This experience can lead to co-authorship on one or more presentations and publications.

Exam

An exam will be based on the course material and will be assigned at a later date. The exam will be due at the end of the course on **Monday, April 28th**.

**Grading System:**

|  |  |  |
| --- | --- | --- |
|  | Value | Grading Scale |
| Reading Summaries | 25% | 90-100% A |
| Research Proposal | 25% | 85-89% B+ |
| Collaborative Research Study | 25% | 80-84% B |
| Exam | 25% | 75-79% C+ |
|  | 100% | 70-74% C |
|  |  | <70% F |
|  |  |

**III. Course Policies**

**Assignments and Exam:**

Students are expected to submit a hard copy of each assignment and the exam on the noted due dates (see Course Outline below). Extraneous circumstances preventing students from submitting an assignment or the exam should be discussed with the instructor on an individual basis. However, there is no guarantee that students will be allowed to make up missed work.

**Attendance/Absence:**

Students are expected to attend all university scheduled class meetings. Extraneous circumstances preventing students from attending class should be discussed with the instructor on an individual basis. Unexcused absences will be handled at the discretion of the instructor and may result in a reduction of the student’s course grade.

**IV. Course Calendar**

**Dates to Note:**

|  |  |
| --- | --- |
| January 13, Mon. | First day of class |
| January 17, Fri. | Drop/add deadline |
| January 20, Mon. | Martin Luther King, Jr. Service Day - *no class* |
| March 3, Mon. | Course withdrawal deadline; semester midpoint |
| March 9-16, Sun-Sun. | Spring break - *no class* |
| April 28, Mon. | Last day of class |

***Tentative* Course Outline:**

(The instructor reserves the right to update the course outline as needed. Students will be notified of updates.)

|  |  |
| --- | --- |
| **Class Meeting Date** | **Assignments Due\*** |
| January 13, Mon. | None |
| January 15, Wed. | Thomas et al. (2010) Chapter 1 (p. 12-14; 17-20) |
| January 22, Wed. | Thomas et al. (2010) Chapter 14; Metcalf et al. (2012) |
| January 27, Mon. | Thomas et al. (2010) Chapter 15; Weaver et al. (2014) |
| January 29, Wed. | Thomas et al. (2010) Chapter 16; Webster et al. (2013) |
| February 3, Mon. | Thomas et al. (2010) Chapter 17; Trost et al. (1997) |
| February 5, Wed. | Thomas et al. (2010) Chapter 18; Donnelly et al. (2009) |
| February 10, Mon. | Thomas et al. (2010) Chapter 19; Cothran et al. (2010) |
| February 12, Wed. | Thomas et al. (2010) Chapter 20; Willenberg et al. (2010) |
| February 17, Mon. | Thomas et al. (2010) Chapter 11 |
| February 19, Wed. | Thomas et al. (2010) Chapter 6 |
| February 24, Mon. | Thomas et al. (2010) Chapter 7 |
| February 26, Wed. | Thomas et al. (2010) Chapter 8 |
| March 3, Mon. | Thomas et al. (2010) Chapter 9 |
| March 5, Wed. | Thomas et al. (2010) Chapter 10 |
| March 17, Mon. | Thomas et al. (2010) Chapter 2 |
| March 19, Wed. | Thomas et al. (2010) Chapter 3 |
| March 24, Mon. | Thomas et al. (2010) Chapter 4 |
| March 26, Wed. | Thomas et al. (2010) Chapter 5 |
| March 31, Mon. | (AAHPERD Convention; No class) |
| April 2, Wed. | (AAHPERD Convention; No class) |
| April 7, Mon. | APA manual Chapter 2 |
| April 9, Wed. | APA manual Chapter 3 |
| April 14, Mon. | APA manual Chapter 4 |
| April 16, Wed. | APA manual Chapter 6 |
| April 21, Mon. | APA manual Chapter 7 |
| April 23, Wed. | ***Research Proposal Presentations; Research Proposal*** |
| April 28, Wed. | ***Exam*** |

**\*Reading summaries are due each day there is a reading due.**

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**Reading Summaries**

**(15 points each)**

Summaries of research articles should answer the following questions:

1. What is the purpose of the study?
2. What were the stated research questions/hypotheses?
3. What was the study design?
4. Who were the participants and what was the setting?
5. What sampling procedures were used?
6. What instrumentation/methodology was used to collect data?
7. What procedures were followed to implement the instrumentation/methodology?
8. How were the data analyzed?
9. What are the ethical considerations for this study?
10. What are the methodological strengths of the study?
11. What are the methodological limitations of the study?

Summaries of readings that are not research articles (e.g., book chapters) should answer the following questions:

1. What is the purpose of the chapter/paper?
2. What are the main points made in the chapter/paper?
3. How could you use the information presented in the chapter/paper in a study you are currently doing or might do in the future?

Scoring Rubric

|  |  |
| --- | --- |
| Accuracy  (5 points) | The reading is correctly interpreted |
| Thoroughness  (5 points) | The questions are thoroughly answered using all of the relevant information from the reading |
| Insight  (5 points) | Answers to questions requiring insight are answered thoughtfully |

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**Research Proposal Assignment**

**(100 points)**

**Due: Wednesday, April 23rd**

Purpose and Rationale

The purpose of this assignment is to give students the opportunity to develop a research proposal, and present the proposal to the class. This assignment assesses students’ ability to apply the material covered in the course, and gives the students a structured context for working toward two of the requirements for advancing in the doctoral program (i.e., writing and presenting a dissertation pre-proposal).

Recommended Directions

1. Obtain a major advisor for your dissertation. ***Do this by Monday, January 27th***.
2. Form a dissertation committee. ***Do this by Monday, February 10th***.
3. Following the guidelines Thomas et al. (2010) present in Chapters 2, 3, and 21 of their text, and through discussion with your major advisor and other dissertation committee members, identify a problem in physical education/activity that you want to address as a researcher, obtain the blessings of your committee to pursue a dissertation focused on the identified problem, and develop a clearly stated study purpose with measureable research questions/hypotheses. ***Do this by Monday, April 7th***.
4. Following (a) the guidelines Thomas et al. (2010) present in Chapters 3 and 21 of their text, (b) the APA (6th Ed.) guidelines, and (c) appropriate examples from the related literature, write the introduction to your proposal. ***Do this by Wednesday, April 16th***.
5. Following (a) the guidelines Thomas et al. (2010) present in Chapters 4, 21, and relevant chapters from Parts 2 and 3 of the text, (b) the APA (6th Ed.) guidelines, and (c) appropriate examples from the related literature, write the methods and references sections of your proposal. Prepare the presentation for your proposal.

Scoring Rubric

|  |  |
| --- | --- |
| Introduction  (20 points) | The introduction is 5-7 pages long; a strong warrant for the study is presented; a clear conceptual/theoretical framework for the study is outlined; a clear purpose statement is provided; appropriate and measureable research questions and/or well justified hypotheses are stated |
| Methods  (40 points) | The methods section is 5-8 pages long; an appropriate study design is selected/described; appropriate sampling techniques are described; appropriate and rigorous measurements are described; a logical procedure for carrying out the study is described; appropriate data analysis techniques are detailed; ethical considerations are adequately addressed |
| Style  (15 points) | The proposal follows APA (6th ed.) guidelines |
| Writing  (15 points) | The paper is well written (straightforward, concise, grammatically and mechanically sound) |
| Presentation  (10 points) | The presentation is clear, the PowerPoint enhances the speaker’s clarity, and the speaker does not read from the paper |

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**Collaborative Research Study**

**(50 points)**

**Due: (Ongoing)**

Purpose and Rationale

The purpose of this assignment is to give students the opportunity to meaningfully contribute to a research study in physical education/activity. This assignment will enable students to apply the material learned in the course by undertaking multiple phases of a research study. Since this is an assignment, work done to complete the assignment will take place outside of scheduled class meeting times. Research meetings, usually lasting 1-2 hours, will be scheduled at various points during the semester, and students will be required to work on the study in smaller groups or on their own during different phases of the study.

The Study

The purpose of the study is to examine the needs of a school community seeking to increase its opportunities for, and engagement in, physical activity.

Tasks

1. Develop the research questions / consider the role of theory in framing the study.
2. Select the study design.
3. Select the participants.
4. Select/develop measures.
5. Develop protocol for data collection.
6. Collect data.
7. Analyze data.
8. Interpret the results.

Scoring Rubric

|  |  |
| --- | --- |
| Leadership  (10 points) | The student offers suggestions, takes initiative, and lends insight |
| Dependability  (10 points) | The student is punctual and can be counted on to complete tasks |
| Involvement  (10 points) | The student actively engages in all phases of the study |
| Collaboration  (10 points) | The student works effectively with all other members of the research team |
| Accuracy  (10 points) | The student performs tasks correctly |