Course: Senior Research in Kinesiology

Instructor: Dr. Dan Southard
Office 172 L
Phone 6869
Email d.southard@tcu.edu

Text: “Understanding Research” by Patten.

Course Objective:

The general purpose of this course is to provide students with the opportunity to conduct a research project related to a specific area of study within the discipline of Kinesiology. The end product of the student’s efforts will be realized through a written research manuscript.

Specific Objectives:

At the completion of this course students should be able to:

(1) determine a research hypothesis that examines a contemporary issue relevant to a sub-discipline in Kinesiology;

(2) find and evaluate research findings relevant to a stated hypothesis;

(3) determine a research methodology that can successfully address a stated hypothesis;

(4) collect, analyze, and display results in a style that is appropriate to the sub-discipline investigated;

(5) discuss results and come to logical conclusions based on the data collected and relevant to the stated hypothesis; and

(6) complete a written manuscript that adequately represents the researcher’s efforts in a style specific to the sub-discipline represented by the stated hypothesis.
Course Outline

Following is a brief outline of the processes required to complete your research project as well as an outline of the product (manuscript). Keep in mind that the following are suggested outlines. Each supervising professor may have slightly different methodologies, emphases and writing styles depending on the area related to your question.

Process

I. The Hypothesis
   A. Determine your area of interest
   B. Come up with a research question/hypothesis related to your area of interest
   C. Visit with Dr. Southard and talk over the merits of your question.

II. Assignment of a Supervising Professor
   A. You will be assigned a supervising professor once your question has been formulated to the point that it is workable.
   B. Develop your question until it is acceptable to your supervising professor.
   C. Your supervising professor will help you with an experimental design to answer your research question

III. Data Collection
   A. Learn to use and/or develop equipment required for data collection.
   B. Collect data.

IV. Data Preparation and Analysis
   A. Work closely with your supervising professor in order to prepare your data for analysis and formulate results.

V. Complete the Manuscript.
   A. You should expect to complete several re-writes before your manuscript is complete. The outline of the “Product” should give you some idea of what is expected.
Product (Major Sections of the Manuscript)

The number of pages per section may vary with each project. The number depicted is offered to give the student a general idea of section length.

I. Introduction (3-4 pages)
   A. Why are you investigating the question that you have chosen?
   B. What research has been completed concerning your topic. This is oftentimes called a “Review of Literature”.
   C. Statement of your problem or hypotheses.

II. Methods (2-4 pages)
   A. Participants – complete description of participants in study.
   B. Apparatus – detailed description of instruments and or equipment used to gather data.
   C. Procedures – thorough explanation of how you collected data
   D. Design and Analysis – describe the design of your investigation and how data will be treated.

III. Results (3-6 pages)
   A. Statistical Results
   B. Graphs and Figures

IV. Discussion (2-6 pages)
   A. Address your hypotheses or questions.
   B. Offer an interpretation of results.

V. References
   A. List references cited in the text of your paper.

VI. Tables, Graphs, and Figures

Depending on the sub-discipline your tables, graphs, and figures may appear at the end of your paper or be included within the text. Your advisor will direct you concerning which is proper for the format of your sub-discipline.
Evaluation

Your final grade will be determined by your supervising professor. Be certain that you understand expectations when you begin your project. It is mandatory that you re-write all sections of your manuscript at least once before completion. However, past experience indicates that typically students will re-write each section at least 3 times before it is acceptable. This means that you should give yourself adequate time to complete your writing. You should work closely with your supervising professor if you expect to finish in a semester.