KINESIOLOGY AND HEALTH SCIENCE  
KIN 585.001: Research and Statistics in Health and Kinesiology  
Spring 2020

Instructor: Malcolm T. Whitehead, PhD  
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Other Contact: (936) 468-3503  
Course Time & Location: W 4:00-6:30pm HPE 223  
Office Hours: T, TH 9:00-11:00am  
Credits: 3 semester hours  
Email: whiteheam@sfasu.edu

I. Course Description:

This is a graduate level course designed to introduce the student to basic statistical analysis topics and concepts related to kinesiology, health, and sport. This course will prepare students to develop research questions, collect data, choose and implement correct statistical analyses, and report the findings/implications.

II. Intended Learning Outcomes/Goals/Objectives (Program/ Student Learning Outcomes):

The course aligns with the Perkins College of Education mission by providing: programs/courses based on sound clinical practice/research, a variety of teaching venues incorporating the latest technologies to a range of diverse student interests, backgrounds, and aspirations, and opportunities related to understanding research to advance knowledge and to contribute to the common good.

James I. Perkins College of Education Diversity Statement is found at the following link: http://coe.sfasu.edu/about-us/

Program Learning Outcomes:

1. The student will be able to demonstrate the ability to read and make critical analysis of original research.
2. The student will demonstrate advanced knowledge of anatomical, physiological, psychological and developmental aspects of physical activity as it relates to human well-being and issues of exercise and sport performance.
3. The student will be able to demonstrate an understanding of a variety of research methods employed in the sub-disciplines of Kinesiology.
4. The student will demonstrate the ability to apply their Kinesiology-related knowledge and skills to think critically and ethically in examining issues and solving problems associated with their chosen sub-discipline.

Student Learning Outcomes:

1. Develop a knowledge and understanding of basic statistical techniques and software. (PLO#3)
2. Locate and evaluate relevant current research. (PLO# 1,3-4)
3. Identify relevant research problems/questions of interest (PLO# 1,3-4)
4. Choose and implement statistical analyses based on research questions and data. (PLO# 1,3-4)
5. Report analysis findings and implications. (PLO# 3-4)

III. Course Assignments, Activities, Instructional Strategies, Use of Technology:

Credit may be gained through completion of all assignments listed below on or before the due dates. Ample time will be provided to complete assignments, and time can be set up with me for any help/guidance. You will be required to access and utilize SPSS statistical software for all assignments (see Section VI). Any assignments or work you hand in should be of professional quality, including being bound (i.e. stapled), and on time. Your assignment grades will be reduced for poor grammar and writing (use the writing center and APA formatting for tables, figures, citations and reference pages), and deviation from assignment instructions. Instructions and details will be provided on assignment rubrics and/or within class discussion.
1. Assignments: You will be required to complete several assignments that cover the major statistical concepts discussed in class. Grades will be determined by a rubric provided in class. The goal of these assignments is to assess your abilities to choose a research question, correctly statistically analyze the data, and interpret the analysis. You will be required to create an outline for each assignment in an effort to help you identify variables and assumptions required for each assignment.

2. Exams: Exams containing open ended comprehensive exam style questions will be used to evaluate comprehension of course content.

IV. Evaluation and Assessments (Grading):

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<thead>
<tr>
<th>Assessments</th>
<th>Grading Scale</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>50 % Percentage</td>
<td>A</td>
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<tr>
<td>Exams</td>
<td>50 % 90-100%</td>
<td>B</td>
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<tr>
<td>Total Points</td>
<td>100 % 80-89%</td>
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<td>70-79%</td>
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<td>60-69%</td>
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<td>59 &amp; below</td>
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V. Tentative Course Outline/Calendar:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>01/15</td>
<td>Syllabus, Introductions, Expectations</td>
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<tr>
<td>01/22</td>
<td>Ethics in research Citi Training Assignment 1</td>
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<tr>
<td>01/29</td>
<td>Research process, Types of research (quantitative vs qualitative), Scientific method, Research components (Introduction, Methods, Results, Discussion) Assignment 2</td>
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<td>02/05</td>
<td>Peer review, obtaining peer reviewed information, formatting Assignment 3</td>
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<td>02/12</td>
<td>Sampling, Design models (within, between, comparing means, correlation, regression), Research questions, Thesis/Dissertation projects Assignment 4</td>
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<td>02/19</td>
<td>Types of data, measurement and scales, sampling, hypothesis testing, and hypothesis writing Assignment 5</td>
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<td>02/26</td>
<td>Measures of central tendency (mean, median, and mode), frequencies, percentiles, and data sets (Excel and SPSS) Assignment 6</td>
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<tr>
<td>03/04</td>
<td>Exam 1—Written exam open ended comprehensive exam style questions</td>
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<td>03/11</td>
<td>Spring Break Class Does Not Meet</td>
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<td>03/18</td>
<td>Comparing Means: One sample t-test, Independent samples t-test Assignment 7</td>
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<td>03/25</td>
<td>Comparing Means: Paired samples t-test Assignment 8</td>
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<td>04/01</td>
<td>Comparing Means: ANOVA Assignment 9</td>
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<td>04/08</td>
<td>Comparing Means: Repeated measures ANOVA, ANCOVA, MANOVA Assignment 10</td>
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<tr>
<td>04/15</td>
<td>Relationships: Correlation and Regression Assignment 11</td>
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<td>04/22</td>
<td>Non-Parametric Data: Chi-Squared, Rank order correlation, Mann-Whitney U-test, Kruskal-Wallis ANOVA, Wilcoxon signed-rank test Assignment 12</td>
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<tr>
<td>04/29</td>
<td>Presenting Data: Poster and oral presentations</td>
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<td>05/06</td>
<td>Exam 2—Written exam open ended comprehensive exam style questions</td>
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VI. Readings (Required and Recommended – including texts, websites, articles, etc.):

1. There is no text-book required for this course. An online text as well as articles supporting select topics will be provided.

2. This course uses the LiveText/Watermark data management system to collect critical assessments for students who are Perkins College of Education majors (undergraduate, graduate, and doctoral) or majors in other colleges seeking educator certification through the Perkins College of Education. Students who do not have an existing LiveText/Watermark account will receive an access code via the SFA email system within the first week of class. You will be required to register your LiveText/Watermark account, and you will be notified how to do this via email. If you forward your SFA e-mail to another account and do not receive an e-mail concerning LiveText/Watermark registration, please be sure to check your junk mail folder and your spam filter for these e-mails.

If you have questions about obtaining or registering your LiveText/Watermark account or any technical questions, call 936-468-7050 or e-mail LiveText@sfasu.edu. Failure to activate the account and/or submit the required assignment(s) within the LiveText/Watermark system may result in course failure.

VI. Course Evaluations:

Near the conclusion of each semester, students in the College of Education electronically evaluate courses taken within the COE. Evaluation data is used for a variety of important purposes including:

1. Course and program improvement, planning, and accreditation;
2. Instruction evaluation purposes; and
3. Making decisions on faculty tenure, promotion, pay, and retention.

As you evaluate this course, please be thoughtful, thorough, and accurate in completing the evaluation. Please know that the PCOE faculty is committed to excellence in teaching and continued improvement.

In the Perkins College of Education, the course evaluation process has been simplified and is completed electronically through MySFA. Although the instructor will be able to view the names of students who complete the survey, all ratings and comments are confidential and anonymous, and will not be available to the instructor until after final grades are posted.

VII. Student Ethics and Other Policy Information:

Acceptable Student Behavior

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Class Attendance and Excused Absence: Policy 6.7

Regular, punctual attendance, documented participation, and, if indicated in the syllabus, submission of completed assignments are expected at all classes, laboratories, and other activities for which the student is registered. Based on
university policy, failure of students to adhere to these requirements shall influence the course grade, financial assistance, and/or enrollment status. The instructor shall maintain an accurate record of each student’s attendance and participation as well as note this information in required reports and in determining final grades. Students may be excused from attendance for reasons such as health, family emergencies, or student participation in approved university-sponsored events. However, students are responsible for notifying their instructors in advance, when possible, for excusable absences. Documentation of attendance and participation will be accomplished through the attendance. For reporting purposes, a student who does not attend class and/or show participation will be dropped from financial aid for that course.

Make-up Opportunities

Make-up work will be allowed for missed assignments/exams due to excused absences for reasons such as health, family emergencies, or student participation in approved university-sponsored events with appropriate documentation. All make-up work must be completed with prior approval by instructor and within seven days of the absence in order to receive any credit.

Academic Accommodation for Students with Disabilities: Policy 6.1 and 6.6

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Penalties for Academic Dishonesty: Policy 4.1

Abiding by university policy on academic integrity is a responsibility of all university faculty and students. Penalties may include, but are not limited to reprimand, no credit for the assignment or exam, re-submission of the work, make-up exam, failure of the course, or expulsion from the university.

Definition of Academic Dishonesty

Academic dishonesty includes both cheating and plagiarism. Cheating includes, but is not limited to:

1. Using or attempting to use unauthorized materials on any class assignment or exam;
2. Falsifying or inventing of any information, including citations, on an assignment; and/or;
3. Helping or attempting to help another in an act of cheating or plagiarism.
4. Plagiarism is presenting the words or ideas of another person as if they were one’s own. Examples of plagiarism include, but are not limited to: submitting an assignment as one's own work when it is at least partly the work of another person; submitting a work that has been purchased or otherwise obtained from the Internet or another source; and/or, incorporating the words or ideas of an author into one's paper or presentation without giving the author credit.

Student Appeals

A student who wishes to appeal decisions related to academic dishonesty should follow procedures outlined in Academic Appeals by Students (6.3).
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Withheld Grades: Policy 5.5

At the discretion of the instructor of record and with the approval of the academic unit head, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F, except as allowed through policy [i.e., Active Military Service (6.14)]. If students register for the same course in future semesters, the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

Student Code of Conduct: Policy 10.4

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the iCare: Early Alert Program at SFA. Information regarding the iCare program is found at https://www.sfasu.edu/judicial/earlyalert.asp or call the office at 936-468-2703.