

**TEXAS A&M UNIVERSITY – COMMERCE**  
**DEPARTMENT OF HEALTH & HUMAN PERFORMANCE**  
**COURSE SYLLABUS FALL 2016**

**HHPK617**  
**STATISTICAL PROCEDURES IN HEALTH & HUMAN PERFORMANCE**

COURSE VALUE: Three (3) credit hours  
COURSE LOCATION: Online  
PROFESSOR: Samantha Roberts, PhD  
OFFICE: Field House 100H  
OFFICE HOURS: M 12-2, W 12-1, R 11-1  
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REQUIRED TEXT: Norman, G.R. & Streiner, D.L. (2014) *Biostatistics: The Bare Essentials* (4<sup>th</sup> edition).  
Shelton, CT: People's Medical Publishing House

### **Course Description**

This course provides an introduction to statistical methods and their implications for health and human performance-specific situations as well as educational researchers. Appropriate computer applications will be integrated with classroom content relating to populations and samples; organizing, displaying and summarizing data; probability; normal distribution; tests of significance; correlation and simple regression; Z and T tests; and the chi square test.

Towards the end of this course we will utilize a piece of software known as *Statistical Packages for the Social Sciences (SPSS)*. This software is available in the university open computer labs. Many students purchase a student version of the software whilst others have SPSS available where they work. You should utilize version SPSS 16 or higher.

Note: This course is delivered fully online and will require the ability to interact with YouTube videos. Many school districts block the use of YouTube.

### **Course Objectives**

At the end of this course the students will be able to:

1. Describe the nature of probability and statistics
2. Organize data using distribution curves; explain the normal distribution
3. Describe data via statistical processes
4. Utilize confidence intervals based on sample size
5. Perform hypothesis testing
6. Apply statistical methods to and evaluate various forms of human performance data
7. Effectively use SPSS to perform statistical calculations
8. Critique statistical methods

### **Course Requirements**

#### **Writing Requirements**

All papers are to follow APA format guidelines. Begin papers with an APA title page. Font is to be 12 point, TNR/Calibri/Cambria/Arial, double spaced. Normal margins: one inch left, right, top, and bottom. Secure the paper with one staple in the top left corner. No folders please.

Written assignments will be graded according to the following criteria:

- Completeness of response to the assignment: 40% of grade

- Organization and coherence: 40% of grade
- Appropriate grammar, punctuation, spelling: 15% of grade
- Use of disciplinary format and citation style (paper displays correct use of student's disciplinary format and citation style (APA, 6th Edition) for papers submitted for presentation or publication. Non-cited statements within a paper will result in a loss of points in accordance with the 5% earned for APA format and citation): 5% of grade

### ***Lesson Module Exams***

A grade up to 100 can be earned on the lesson module exams. Please keep in mind that this is a master's/doctoral level research tools course. When you take the exams, make notes regarding the questions and your responses. You are responsible for determining the accuracy of your answers. You are also responsible for the identification of reasons a particular question may have been missed. I want you to take responsibility for your learning. work with and through your study group to master the material.

### ***Discussion Participation***

A grade will be assigned for participation in the discussion group for each module. Generally this grade will be 5. A grade of 0 is given to students who do not participate in the discussion forum.

### ***Reflection***

Each module will require that you post thoughts to the journal. The same participation grading methodology will be utilized for reflection activities as that utilized for discussion participation. Generally this grade will be 5. A grade of 0 is given to students who do not participate in the discussion forum.

### ***Group Assignments***

Students will create their own groups. The group should establish rules of operation and hold every member accountable. Please indicate on the first of the project the names of those who participated, as well as, the module for which the project is intended. Group assignments will be awarded a grade ranging from 10 downward. I strongly encourage you to collaborate to master the concepts and exams.

Establish rules for the operation for your group. Hold every member accountable. Do not cover for anyone who does not participate! Each group is free to go through the stages of storming, forming, and norming. I suggest getting to the norming stage as quickly as possible. **DO NOT LET A NON-PARTICIPANT HOLD BACK THE PROGRESS OF YOUR GROUP.** Set due dates and require all members of the group to comply. I know that working in groups is frustrating; however, the modern workplace is about group work. Teaming is a critical skill for success in today's world.

### ***Grading***

Your grade will be determined through a combination of your grades on the module exams, participation in the discussion groups, reflection assignments, and group projects. Each of these will carry assigned weight to determine your final grade. Keep in mind that discussions and reflections assignments are graded. They make up a part of your grade as does the content mastery exam. You must participate in these activities.

The following final grading scale will be utilized to determine the final grade based on the average of your course work:

- A = 90 to 100
- B = 80 to 89
- C = 70 to 79
- D = 60 to 69
- F = under 60

Your grade will be calculated by dividing the total points earned by the total possible points.

## Technology Requirements

The following information on technological requirements has been provided to assist you in preparing to use technology successfully in this course. You should have access to a computer with:

- Internet access/connection – high speed recommended (not dial-up)
- Microsoft Office
- SPSS (Statistical Package for the Social Sciences – Version 16 or higher)

You also have access to a personal MyLeo account and a **MyLeo email address**. This is the email address that I will use to send you information regarding this course. Please check it regularly, and be sure to send me emails from this address too.

## Access and Navigation

This course will be facilitated using eCollege, the Learning Management System used by Texas A&M University-Commerce. To get started with the course, go to: <https://leo.tamuc.edu/login.aspx>. You will need your CWID and password to log in to the course. If you do not know your CWID or have forgotten your password, contact Technology Services at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

## Communication & Support

The best way to reach me is via email ([Samantha.Roberts@tamuc.edu](mailto:Samantha.Roberts@tamuc.edu)) as I check it frequently. I will aim to reply with 24 hours to your MyLeo email address. Please be courteous and professional in all of your interactions with me and fellow students.

### *eCollege Student Technical Support*

Texas A&M University-Commerce provides students technical support in the use of eCollege. The student help desk may be reached by the following means 24 hours a day, seven days a week.

- **Chat Support:** Click on 'Live Support' on the tool bar within your course to chat with an eCollege Representative.
- **Phone:** 1-866-656-5511 (Toll Free) to speak with eCollege Technical Support Representative.
- **Email:** [helpdesk@online.tamuc.org](mailto:helpdesk@online.tamuc.org) to initiate a support request with eCollege Technical Support Representative.
- **Help:** Click on the 'Help' button on the toolbar for information regarding working with eCollege (i.e. How to submit to Dropbox, How to post to Discussions etc...)

## Course & University Procedures/Policies

### **Class Participation**

Systematic and timely on-line participation is expected. University policy notes that excused absences include (i) participation in an authorized university activity, (ii) illness verified by a physician, (iii) death in the immediate family, and (iv) verifiable, official court appearance. Keep in mind that this course has been developed to allow maximum flexibility in regard to your online access. You are not required to logon at specific times on specific dates. You will work with other members of the class on specific tasks; however, this activity is determined by the group.

### **Assignments Submitted by Deadlines**

Assignments are due as stated. Class participants are strongly recommended to participate in their assigned groups. Numbers generate strength. Teaming is an essential soft-skill in every academic environment. Individual team members will be evaluated; however, teams often rise or fall together. Every team should select a lead member. Problems regarding team participation should be discussed with the course instructor. Under no circumstances should team members be allowed a free-ride at the expense of other members.

**Respect Differing Views**

As with all graduate courses, this course deals with ideas. Please be respectful of individuals with ideas and beliefs that differ from your own. If you disagree with someone then ask them why they believe as they do, and then listen to the answer. People can have complex reasoning for what is seen as, on the surface, a simple idea. Only civil and even tempered discussions will be permitted in class.

**Academic Honesty**

Plagiarism within an assignment will result in a failing grade for that assignment. I expect all assignments for this course to be original works produced specifically for this course. Work produced, whether in part or in whole, from assignments for other courses will not be accepted for credit.

**Late Assignments**

Late assignments will lose one letter grade (10%) per day late. The measurement of days ends at 11:59pm the following day of class. A new day begins at Midnight (12 am) and continues to 11:59 pm.

**Examination Policy**

Exams are timed but they are open book and may be taken in a group.

**Religious Holidays Policy**

Reasonable accommodation will be given to students who require homework extensions because of religious holidays. However, your best option is to complete the required work early, as this is a fast paced summer course and you will not want to get behind.

**Dropping the Class**

If you need to adjust your schedule by dropping this course, please follow university procedures to officially drop the class. If you fail to officially drop the class, a failing grade shall be assigned at the end of the course.

Incompletes: Per university policy is granted only for circumstances beyond student's control which prevented the student from attending classes during Finals Week or the preceding three weeks (Policy A 12.07, 1998). The extension cannot exceed one semester. Failure to fulfill plan requirements within the specified time will result in an F.

**Course Communication**

Course communication will occur through your MyLeo Account. You will need to regularly and systematically review your e-mail on a timely basis.

**Writing Center**

Students are encouraged to visit the A&M-Commerce Writing Center for writing assistance. Visit the website at: <http://web.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/departments/literatureLanguages/writingCenter/default.aspx>

***University Specific Procedures*****Nondiscrimination notice:**

A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained

**Statement on Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment (see Student's Guide Handbook).

## **Academic Honesty Policy**

Texas A&M University-Commerce does not tolerate **plagiarism** and other forms of academic **dishonesty**. Conduct that violates generally accepted standards of academic honesty is defined as academic dishonesty. "Academic dishonesty" includes, but is not limited to, plagiarism (the appropriation or stealing of the ideas or words of another and passing them off as one's own), cheating on exams or other course assignments, collusion (the unauthorized collaboration with others in preparing course assignments), and abuse (destruction, defacing, or removal) of resource material. Be aware that the intent to deceive the reader does not have to be present for plagiarism to occur. For more information, please go to <http://www.plagiarism.org/>. **If you are in any doubt as to whether your work constitutes plagiarism or academic dishonesty, please discuss this with me confidentially.**

## **Students with Disabilities**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce, Gee Library, Room 132

Phone (903) 886-5150 or (903) 886-5835; Fax (903) 468-8148

[StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)

Student Disability Resources & Services

## **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

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**Course Outline**  
**Fall 2016**

<b>MODULES</b>	<b>OPEN DATE</b>	<b>CLOSE DATE</b>
Module One: Terminology - Terms and Concepts / The Nature of Data and Statistics Chapter 1: The Basics Chapter 2: Looking at the Data Chapter 3: Describing Data with Numbers	September 2	September 16
Module Two: Normal Distribution Curve & Probability Chapter 4: The Normal Distribution Chapter 5: Probability	September 17	September 23
Module Three: Predicting Data Ranges – Confidence Intervals Pages: 62-63, 66f, 147-148, 236, 345	September 24	September 30
Module Four: Advanced Confidence Intervals Pages: 62-63, 66f, 147-148, 236, 345	October 1	October 8
Module Five: Hypothesis Testing (One-tail versus two-tail) Chapter 6: Elements of Statistical Inference Chapter 7: Comparing Two Groups-t-Test	October 9	October 20
Module Six: ANOVA Chapter 8: More than Two Groups Chapter 9: Factorial ANOVA Chapter 10: Two Repeated Observations (paired t-Test) Chapter 11: Repeated-Measures ANOVA Chapter 12: MANOVA	October 21	November 3
Module Seven: Comparing Two Populations Chapter 13: Simple Regression and Correlation	November 4	November 17
Module Eight: Linear Regression Chapter 13: Simple Regression and Correlation Chapter 14: Multiple Regression	November 18	November 30
Module Nine: Chi-Squared Distributions Chapter 22: Measures of Association for Categorical Data	December 1	December 10

\*Please note that this schedule is tentative and is subject to change. Also, this is NOT all-inclusive (i.e., Homework/Participation). Other assignments might be given throughout the semester, so you MUST check the class announcements and e-mail frequently.