



TEXAS A&M UNIVERSITY  
**COMMERCE**

## **COUN 609: Introduction to Statistics**

Course Syllabus: [Fall, 2022]

[Monday, CHEC]

### **INSTRUCTOR INFORMATION**

**Instructor:** James M. Devlin, PhD

**Office Location:** Binnion 223

**Office Hours:** By appointment.

**University Email Address:** James.Devlin@tamuc.edu

**Preferred Method of Communication:** Email.

**Communication Response Time:** 24 hours

### **COURSE INFORMATION**

#### **Materials – Textbooks, Readings, Supplementary Readings**

##### **Required Textbook**

Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). Sage.

American Psychological Association. (2019). *Publication manual of the American Psychological Association* (7th ed.). Author.

**Note.** This course utilizes D2L as its Learning Management System

##### **Required Supplemental Readings**

Balkin, R. S., & C. J. Sheperis (2011). Evaluating and reporting statistical power in counseling research. *Journal of Counseling & Development*, 89(3), 228-272. <https://doi.org/10.1002/j.1556-6678.2011.tb00088.x>

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159. <https://doi.org/10.1037//0033-2909.112.1.155>

Hays, D. G. (2011). Infusing qualitative traditions in counseling research designs. *Journal of Counseling & Development*, 89(3), 288-295. <https://doi.org/10.1002/j.1556-6678.2011.tb00091.x>

Trusty, J. (2011). Quantitative articles: Developing studies for publication in counseling journals. *Journal of Counseling & Development*, 89(3), 261-267. <https://doi.org/10.1002/j.1556-6678.2011.tb00091.x>

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[6678.2011.tb00086.x](#)

Watson, J. C., Lenz, A. S., Schmit, M. K., & Schmit, E. L. (2016). Calculating and reporting estimates of effect size in counseling outcome research. *Counseling Outcome Research & Evaluation*, 7(2), 111-123. <https://doi.org/10.1177/2150137816660584>

Wester, K. L., & Borders, L. D. (2014). Research competencies in counseling: A delphi study. *Journal of Counseling & Development*, 92(4), 447-458. <https://doi.org/10.1002/j.1556-6676.2014.00171.x>

### **Required Computer Software**

The Statistical Package for the Social Sciences (SPSS; Version 24 or higher) computer software—PREMIUM GradPack.

Note: SPSS Statistical software (version 24 or higher is recommended). About the cheapest place you can purchase and download a copy is from <http://www.hearne.software/Home>. Other sources include <http://www.onthehub.com/spss/> and <http://studentdiscounts.com> (can be installed on two computers). Be sure that you choose the PREMIUM GradPack. If you do not buy the Premium version, you will not be able to do the last few assignments for this class. You can get a 6 month or 12 month license. The software is also available on computers located in the student labs at the Metroplex and various labs on the Commerce campus.

## **COURSE DESCRIPTION**

### **Catalogue Description of the Course**

**COUN 609. Introduction to Statistics for Counseling and Human Service Research**  
A doctoral-level introductory statistics course, emphasizing applications to counseling and human service research. The major focus will involve an examination of basic statistical procedures: descriptive statistics, hypothesis testing, and univariate inferential statistics. Usage of a computer-based statistical software tool (Statistical Package for the Social Sciences) will be emphasized. Meets requirements for a Level II research tool course. Prerequisite: Level I research tool or equivalent or permission from the course instructor.

### **General Course Information**

Introduction to Statistics for Counseling and Human Service Research is intended to provide doctoral-level students with training in introductory statistical techniques and is approved by the Graduate School as a Level II research tool. The emphasis in this course will be on understanding basic statistical concepts and applying and interpreting univariate tests of statistical inference applicable to counseling and human service research. Content will include, but not be limited to, descriptive statistics, sample distributions, null hypothesis significance testing, effect size estimates and confidence intervals, statistical power, model assumptions, data screening and cleaning, visual representation and inspection of data, and univariate inferential statistics. The Statistical Package for the Social Sciences (SPSS; version 24 or higher) will be

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employed to assist in the analysis of data for this course. Students should have access to a computer, SPSS software, and the Internet. Access is available at the Metroplex Center and on the Commerce campus in certain computer labs.

## Doctoral Student Learning Outcomes

### 2016 CACREP Standards Addressed in COUN 609

Doctoral Standard	Learning Activity	Assignment	Assessment Rubric	Benchmark
6.B.4.a. research designs appropriate to quantitative and qualitative research questions	<ul style="list-style-type: none"> <li>Lecture (weeks 1, 10-14)</li> <li>Reading (Field, 2018 [Chapters 1, 8-10, 12, &amp; 15]; Hays, 2011; Trusty, 2011)</li> <li>Website (<a href="http://www.balkinresearchmethods.com">http://www.balkinresearchmethods.com</a>)</li> <li>In-class demonstrations (weeks 10-14)</li> <li>Class discussion (weeks 1, 10-14)</li> </ul>	<ol style="list-style-type: none"> <li>Knowledge Quizzes 1, 8, 9, &amp; 10</li> <li>In-class Presentation</li> </ol>	<ol style="list-style-type: none"> <li>n/a</li> <li>In-class Presentation rubric</li> </ol>	<ol style="list-style-type: none"> <li>≥ 80% will score ≥ 80% on knowledge quizzes 1, 8, 9, &amp; 10</li> <li>≥ 80% of average rubric scores will either meet (2) or exceed (3) expectation</li> </ol>
6.B.4.b. univariate and multivariate research designs and data analysis methods	<ul style="list-style-type: none"> <li>Lectures (weeks 10-14)</li> <li>Readings (Field, 2018 [Chapters 8-10, 12, &amp; 15]; Hays, 2011; Trusty, 2011)</li> <li>Website (<a href="http://www.balkinresearchmethods.com">http://www.balkinresearchmethods.com</a>)</li> <li>In-class demonstrations (weeks 10-14)</li> <li>Class discussion (weeks 10-14)</li> </ul>	<ol style="list-style-type: none"> <li>Knowledge Quizzes 8, 9, &amp; 10</li> <li>Application Assignment 2</li> <li>In-class Presentation</li> </ol>	<ol style="list-style-type: none"> <li>n/a</li> <li>n/a</li> <li>In-class Presentation rubric</li> </ol>	<ol style="list-style-type: none"> <li>≥ 80% will score ≥ 80% on knowledge quizzes 8, 9, &amp; 10</li> <li>≥ 80% will score ≥ 80% on application assignment 2</li> <li>≥ 80% of average rubric scores will either meet (2) or exceed (3) expectation</li> </ol>

Content Areas include, but are not limited to, the following:

#### I. Descriptive Statistics

- Central Tendency: frequency, mean, median, and mode
- Dispersion: range, quartiles, standard deviation, and variance
- Z-scores

#### II. Null Hypothesis Significance Testing

- Sample distribution
- p-value
- Type 1 and Type II errors
- Null and alternative hypothesis

#### III. Basic Statistical Concepts and Procedures

- Model assumptions
- Effect size estimates
- Confidence intervals
- Statistical power



- e. Visual representation and inspection of data
- f. Data cleaning

#### **IV. Univariate Inferential Statistics**

- a. research design and research questions
- a. t-test
- b. dependent t-test
- c. One-way ANOVA
- d. Repeated Measures ANOVA
- e. Correlation: Bivariate and simple regression

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

In this class, you will utilize the Learning Management System (LMS) entitled D2L for portions of instructional and learning methods, submitting assignments, participating in online discussions, and completing quizzes. You will need to utilize other technologies such as SPSS, Microsoft Word, PowerPoint, etc. If you have issues with this system, it is your responsibility to contact the help desk immediately.

### **Instructional Methods**

This course consists of lecture and didactic learning methods, small group discussions, and in-class assignments and demonstrations using SPSS, coupled with experiential learning and practical application. Be aware that a significant part of this class requires you to learn and become proficient with using SPSS. When we are not meeting face to face, you will be expected to participate and complete all online tasks via D2L. In addition, small lecture, discussion activities, and workshops may be utilized during this course.

### **Student Responsibilities or Tips for Success in the Course**

As a student in this course, you are responsible for the active learning process. Expectations of this course include the following:

1. You are expected to display professionalism at all times. Be respectful of your professor and peers. Be open to feedback, as you will receive this throughout the program.
2. Prepare for classes. Complete any and all readings prior to class time.
3. Complete all assignments by the deadline.
4. Adhere to the university student code of conduct.
5. Participate. During face-to-face classes, you are expected to actively participate in all activities and discussion. In the online format, you are expected to participate in all online discussions/activities. This is crucial to your learning.
6. All writing assignments must be done according to APA 6<sup>th</sup> edition standards.
7. Regularly check your University email. My suggestion is to check this at least once a day as your instructors and others from the department and University may contact you.
8. Begin your readings ASAP. Sometimes it may take more than one attempt to digest the

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**material.**

9. **Deadlines are the last possible moment something is due—not the first moment to start. Work ahead. I realize this may not always be possible; however, when you can, do so.**
10. **Be open to the process. This degree takes time, work, effort, and growth.**

### **Assignments/Assessments**

1. **Ten (10) Knowledge Quizzes (100 points total; 10 points each quiz):** Throughout the semester, 10 knowledge quizzes, starting at week 2 will afford students the opportunity to test their knowledge and skill on various research and statistical concepts learned from course readings and class lectures discussed. Although quizzes are not cumulative in nature, information learned in previous weeks assist student in responding to the quiz questions. A good rule of thumb is to be familiar with the information from the week prior to the date of the quiz as well as the information that will be discussed on the week of the quiz. Knowledge Quiz questions will be presented in multiple choice, true/false, and short answer formats. Quizzes will be administered at the beginning of class on dates specified in the course schedule (see COURSE OUTLINE/CALENDAR on last page). A missed quiz due to being absent or late to class, unless previous accommodations have been arranged, may result in a forfeit to take the quiz. The main purpose of knowledge quizzes is to ensure that content is reviewed prior to class so that class time is spent solidify your understanding and enhancing practical application. Thus, please invest time and energy into the course readings prior to arriving to class.
2. **Two (2) Application Assignments (100 points total; 50 points each application assignment):** Two application assignments will be distributed in D2L throughout the semester (weeks 7 and 12). The purpose of application assignments is to evaluate your knowledge and skill regarding research design and statistical concepts, beyond quizzes, and develop your application skills of those research design and statistics concepts. Application assignments may require you to critically evaluate a research scenario; identifying various statistical procedures; developing your own research questions and scenario as it relates to the particular design; complete tasks in SPSS; and provide practical implications for counseling/human service. Both application assignments will be distributed two weeks prior to its due date. Feel free to use your classmates as a resource, but your work is your own and must be submitted independently in D2L. Submission of application assignments should be completed as a Word document following APA 7<sup>th</sup> edition guidelines (unless notified otherwise). The goal of application assignments is to demonstrate your knowledge of various basic statistical procedures and concepts discussed in this course.

**Note.** You may be asked to develop a result section write-up suitable for publication and/or include a PDF version of SPSS output as part of your response to application assignment questions.

3. **In-Class Presentation (100 points):** Along with a partner, you will choose a statistic covered in class (i.e., t-test, dependent t-test, one-way ANOVA, repeated measures ANOVA, bivariate correlation, simple regression; content starts at week 9) and demonstrate it to your peers through an 20-25 minute oral and visual presentation. One of the highest forms of learning is the ability to teach others.

This in-class presentation should include the following elements: (a) detailed overview of the chosen statistic; (b) research scenario, research design, and research question; (c) dataset fitting the constructed scenario; (d) demonstration of using the statistical procedure in SPSS, to include appropriate model assumptions; and (e) explanation of results and exploration of practical implications.

The goal of this presentation is to demonstrate your knowledge and skill in research and statistics, emphasizing, in part, CACREP standards 6.B.4.a. and 6.B.4.b., as well as evaluate your ability to conceptualize and apply research findings to fields of counseling and human service.

**In-Class Presentation Rubric  
6.B.4.a. and 6.B.4.b.**

	<b>1 – Does not meet Expectation (0-15.9 points)</b>	<b>2 – Meets Expectation (16-17.9 points)</b>	<b>3 – Exceeds Expectation (18-20 points)</b>
<b>Detail overview of chosen statistic (20 points)</b>	Description of statistic was insufficient or incorrect, lacking depth, detail, and accuracy (description provided did not reach beyond information from textbook); no examples were provided to evidence comprehension; no evidence of knowledge about chosen statistic was communicated/evidenced throughout the presentation; not representative of doctoral level work	Description of statistic sufficient with only containing one or two incorrect elements (some of the description provided reached beyond information from textbook); description had depth and detail but one or two elements missing/incorrect; evidence of knowledge about statistic was communicated/ evidenced throughout the presentation; representative of doctoral level work	Exceptional description of statistic with no missing elements (description provided reached beyond information from textbook); examples provided were accurate and communicated comprehension; information had depth and detail; clear evidence of knowledge about statistic was communicated/ demonstrated/evidenced throughout the presentation; representative of doctoral level work
<b>Research scenario, research design, and research questions (20 points)</b>	Research scenario, research design, and research question were not addressed/ identified, poorly addressed, or lack depth and detail; no rationale	Research scenario, research design, and research question were addressed/identified and had depth and detail but missing one or two key elements; rationale	Research scenario, research design, and research question were addressed/identified with attention to detail and depth with no missing key elements; clear rationale





	provided connecting scenario, research design, and/or research questions to one another; no evidence of comprehending particular research designs with constructing types of research questions; not representative of doctoral level work	provided connecting scenario, research design, and/or research questions to one another but missing one or two key elements; some evidence of comprehending particular research designs with constructing types of research questions; representative of doctoral level work	provided connecting scenario, research design, and/or research questions to one another with no missing elements; clear evidence of comprehending particular research designs with constructing types of research questions; representative of doctoral level work
Dataset fitting the constructed scenario (20 points)	Dataset was inappropriately designed/missing information or misaligns with the scenario, research design, and/or research question; dataset omits considerations of sample size, statistical power, and effect size; not representative of doctoral level work	Dataset was appropriately designed but missing one or two key elements; dataset aligns with the scenario, research design, and research question but missing one to two key elements; dataset attends to considerations of sample size, statistical power, and effect size; not representative of doctoral level work	Dataset was detailed, well-designed with no missing detail; dataset clearly aligned with the scenario, research design, and research question with no missing detail; dataset clearly attended to considerations of sample size, statistical power, and effect size; not representative of doctoral level work
Demonstration of using the statistical procedure in SPSS, to include appropriate model assumptions (20 points)	Demonstration was poorly executed, misleading, or incorrect; demonstration was not relevant to the chosen statistic, design, and research question; demonstration lacked depth and detail; no evidence of knowledge about the statistic was communicated/evidenced during SPSS demonstration; not representative of doctoral level work	Demonstration was properly executed but missing one or two key elements; demonstration was relevant to the chosen statistic, design, and research question but missing one or two key elements; demonstration had depth and detail but missing one or two key elements; evidence of knowledge about the statistic was communicated/evidenced during demonstration; representative of doctoral level work	Demonstration was properly executed with great precision and accuracy with no missing detail; demonstration was highly relevant to the chosen statistic, design, and research question; demonstration had exceptional depth and detail with no missing detail; clear evidence of knowledge about the statistic was communicated/evidenced during demonstration; representative of doctoral level work
	1 – Does not meet Expectation (0-7.9 points)	2 – Meets Expectation (8-9.9 points)	3 – Exceeds Expectation (9-10 points)
Explanation of results and exploration of practical implications (10 points)	No communication of results or results were irrelevant/incorrect with chosen statistic; absence of a practical discussion of findings or practical discussion	Communication of results was evident and corresponded to chosen statistic but missing one or two key elements; practical discussion of findings was evident but	Communication of results was clearly evident and corresponded to chosen statistic with no missing detail; practical discussion of findings was clearly evident with no missing



	was highly underdeveloped; no practical applications to counseling or human service shared (implications); not representative of doctoral level work	missing one or two key elements; practical applications to counseling or human service (implications) was evident but missing one or two key elements; representative of doctoral level work	detail; practical applications to counseling or human service (implications) was clearly evident with no missing detail; representative of doctoral level work
Presentation and Presenter Qualities (10 points)	Approval of topic not confirmed; presentation occurred outside the allotted time frame ; information appeared disorganized/ disjointed; presenters appeared unrehearsed and presentation was unpolished; presentation quality was inappropriate for doctoral level work; presenters were not invested or enthusiastic about the topic or presentation (no evidence during presentation); less than 3 scholarly sources were utilized	Approval of topic was confirmed; presentation occurred within the allotted time frame . Information appeared fairly organized, but missed one or two key elements; presenters appeared rehearsed at times, but missed one or two key elements; presentation quality was acceptable for doctoral level work; presenters seemed invested and euthanistic about the topic and throughout the presentation about 75% of the time; 5-8 scholarly sources were utilized	Approval of topic was confirmed; presentation occurred within the allotted time frame ; information was well-organized with no missing detail; presenters appeared rehearsed; presentation material(s) were aesthetically pleasing; presentation quality was appropriate for doctoral level work; presenters seemed invested and euthanistic about the topic and throughout the presentation about 90% of the time; 9 or more scholarly sources were utilized

## GRADING

Final grades in this course will be based on the following scale:

90%-100%	A
80%-89%	B
70%-79%	C
60%-69%	D
< 59%	F

Assignment/Assessment	Point Value
Application Assignments	100
Knowledge Quizzes	100
In-class Presentation	100

Total points possible = 300. Your Final Grade is determined adding the point values earned from each assignment and dividing by 300. The resulting value is multiplied by 100 to yield a

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percentage. For example:  $(240 \text{ [points earned]} / 300) \times 100 = 80\%$

Assignments are due on the day noted in the syllabus. Unless noted otherwise, all assignments are due at the beginning of the class period. Late assignments will have 10% deduction per day late from the final score.

## TECHNOLOGY REQUIREMENTS

### Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

### Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A



Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

### Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or point release of that major version) and the previous major version of iOS (the latest minor or point release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version.  Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
  - o 512 MB of RAM, 1 GB or more preferred
  - o Broadband connection required courses are heavily video intensive
  - o Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- For YouSeeU Sync Meeting sessions **8 Mbps** is required. Additional system requirements found here: <https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>
- You must have a:
  - o Sound card, which is usually integrated into your desktop or laptop computer
  - o Speakers or headphones.

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- \*For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: JAVA web site <http://www.java.com/en/download/manual.jsp>
- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.

JavaScript is enabled.

Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  - Adobe Reader <https://get.adobe.com/reader/>
  - Adobe Flash Player (version 17 or later) <https://get.adobe.com/flashplayer/> o
  - Adobe Shockwave Player <https://get.adobe.com/shockwave/>
  - Apple Quick Time <http://www.apple.com/quicktime/download/>
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

## ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

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## **COMMUNICATION AND SUPPORT**

**Brightspace Support**

**Need Help?**

**Student Support**

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### **Technical Support**

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the Live Chat or click on the words “click here” to submit an issue via email.



### **System Maintenance**

Please note that on the 4th Sunday of each month there will be System Maintenance which means the system will not be available 12 pm-6 am CST.

### **Interaction with Instructor Statement**

Communication with your professors is key to your professional growth. I am here to support and guide you along your academic journey. With that being said, I cannot help you if you do not communicate with me. Please make an appointment if you have any concerns or questions. Because I teach in different locations, email is the best way to reach me. I will attempt to answer all emails within 24 hours, Monday-Friday, but at times will need up to 72 hours to do so. When emailing, please use your university email and address me with courtesy and respect.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

Written assignments are due on the day noted in the syllabus. All papers are due at the beginning of the class period. Late papers will have 10% deduction per day late from the final score.

### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

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## University Specific Procedures

### Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette  
<http://www.albion.com/netiquette/corerules.html>

### TAMUC Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

### Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

#### Undergraduate Academic Dishonesty 13.99.99.R0.03

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

#### Graduate Student Academic Dishonesty 13.99.99.R0.10

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

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## **ADA Statement**

### **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 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

### **Nondiscrimination Notice**

Texas A&M University-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.

### **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 the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

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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.

### COURSE OUTLINE/CALENDAR

Date	Topic	CACREP Standard(s)	Readings	Assignments
Week 1	-Introductions -Syllabus review -Course Overview and Expectations -Introduction to Statistics -Types of research in counseling (quantitative and qualitative research designs and research questions)	6.B.4.a	-Field (2018) Chapter 1: Introduction to statistics (Basic Concepts) ... -Wester & Borders (2014) Research competencies in counseling ... -Hays (2011) Infusing qualitative traditions ... -Trusty (2011) Quantitative articles ... - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “Types of Research”	
Week 2	-Introduction to Statistics Cont. -Descriptive Statistics: Central Tendency and Dispersion		-Field (2018) Chapter 1: Introduction to statistics (Basic Concepts Cont.)... -Field (2018) Chapter 2: The SPINE of statistics (Central Tendency and Dispersion) - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “Measures of Central Tendency” and “Measures of Variability”	Knowledge Quiz 1 (completed in class)
Week 3	-Descriptive Statistics -Z-scores -NHST: normal distribution		-Field (2018) Chapter 2: The SPINE of statistics (descriptive statistics, Z-scores) -Field (2018) Chapter 3: The phoenix of statistics (NHST) - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “Standard Scores,” “Raw scores, Standard Scores, Percentiles,” and “Understanding z-scores”	Knowledge Quiz 2 (completed in class)
Week 4	-Model assumptions -SPSS environment		-Field (2018) Chapter 4: The IBM SPSS statistical environment -Field (2018) Chapter 6: The beast of bias	Knowledge Quiz 3 (completed in class)
Week 5	-NHST Cont.: p-value, type 1 and type II errors, and null and alternative hypotheses		-Field (2018) Chapter 2: The SPINE of statistics (Hypothesis Testing) -Field (2018) Chapter 3: The phoenix of statistics (NHST) - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “Standard Scores,” “Raw scores, Standard Scores, Percentiles,” and “Hypothesis Testing”	Knowledge Quiz 4 (completed in class)
Week 6	-Effect size estimates -Confidence intervals		-Field (2018) Chapter 3: The phoenix of statistics (effect size) - Watson et al. (2016) Calculating and reporting estimates of effect size in counseling outcome research - Cohen (1992) A power primer	Knowledge Quiz 5 (completed in class)

The syllabus/schedule are subject to change.



Week 7	Break/Holiday		Break/Holiday	Break/Holiday
Week 8	-Statistical power (and type 1 and type 2 error revisited)		-Field (2018) Chapter 2: The SPINE of statistics (statistical power) -Balkin & Sheperis (2011) Evaluating and reporting statistical power in counseling research - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “G*Power: Demonstration tutorial”	-Knowledge Quiz 6 (completed in class) -Application Assignment 1 due
Week 9	-Visual presentation and inspection of data (revisiting model assumptions) -Data cleaning		-Field (2018) Chapter 5: Exploring data with graphs -Field (2018) Chapter 6: Beast of bias - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “Model Assumptions in ANOVA”	Knowledge Quiz 7 (completed in class)
Week 10	-t-test -experimental research questions	6.B.4.a 6.B.4.b.	-Field (2018) Chapter 10: Comparing two means -Trusty (2011) Quantitative articles ... - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “SPSS tutorial: Independent t-test”	
Week 11	-One-way ANOVA -experimental research questions	6.B.4.a 6.B.4.b.	-Field (2018) Chapter 12: GLM 1: Comparing several independent means - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “ANOVA Theory” and “One-way ANOVA” -Trusty (2011) Quantitative articles ...	Knowledge Quiz 8 (completed in class)
Week 12	-dependent t-test -pre-experimental research questions	6.B.4.a 6.B.4.b.	- <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “Dependent t-test” and “SPSS tutorial: Dependent t-test and Cohen’s d” -Trusty (2011) Quantitative articles ...	
Week 13	-Repeated Measures ANOVA -pre-experimental research questions	6.B.4.a 6.B.4.b.	-Field (2018) Chapter 15: GLM 4: Repeated-measures designs -Trusty (2011) Quantitative articles ... - <a href="http://www.balkinresearchmethods.com">www.balkinresearchmethods.com</a> – “Repeated measures ANOVA”	-Knowledge Quiz 9 (completed in class) -Application Assignment 2 due
Week 14	-Correlations: Bivariate and regression -correlation research questions	6.B.4.a 6.B.4.b.	-Field (2018) Chapter 8: Correlation -Field (2018) Chapter 9: The linear model (regression) -Trusty (2011) Quantitative articles ...	Knowledge Quiz 10 (completed in class)
Week 15	Last day of class: In-Class Presentation		Last day of class: In-Class Presentation	Last day of class: In-Class Presentation

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