TEXAS A&M UNIVERSITY COMMERCE

COUN 613: Advanced Statistical Techniques

Course Syllabus: *[~~semester, year~~Spring, 2022]*
[~~date, time, location, room number~~Wednesday, 7:20 to 10 pm, CHEC]

INSTRUCTOR INFORMATION

Instructor:
Office Location:
Office Hours:
University Email Address:
Preferred Form of Communication:
Communication Response Time:

Graduate Co-Instructor (if available):
Graduate Co-Instructor University Email Address (if available):

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 it Learning Management System

Required Supplemental Readings

Abdullah, F., Finkelstein, L., Khan, S. H., & Hill, W. J. (1994). Modeling in measurement and instrumentation: An overview. *Measurement, 14*, 41-53. https://doi.org/10.1016/0263-2241(94)90042-6

Finn, S. E., & Tonsager, M. E. (1997). Information-gathering and therapeutic models of assessment: Complementary paradigms. *Psychological Assessment, 9*, 374-385. https://doi.org/1040-3590/97/S3.00

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

Lambie, G. W., Blount, A. J., & Mullen, P. R. (2017). Establishing content-oriented evidence for psychological assessments. *Measurement and Evaluation in Counseling and Development, 50*(4), 210-216. https://doi.org/10.1080/07481756.2017.1336930

*[~~semester/year~~Spring, 2022]*The *syllabus/schedule are subject to change.*

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Lenz, A. S., & Wester, K. L. (2017). Development and evaluation of assessments for counseling professionals. *Measurement and Evaluation in Counseling and Development, 50*(4), 201-209. https://doi.org/10.1080/07481756.2017.1361303

Levers, L. L., Anderson, R. I., Boone, A. M., Cebula, J. V., Edger, K., Kuhn, L., … Sindlinger, J. (2008). *Qualitative research in counseling: Applying robust methods and illuminating human context*. http://counselingoutfitters.com/vistas/vistas08/Levers.htm

Lewis, T. F. (2017). Evidence regarding the internal structure: Confirmatory factor analysis. *Measurement and Evaluation in Counseling and Development, 50*(4), 239-247. https://doi.org/10.1080/07481756.2017.1336929

Magno, C. (2009). Demonstrating the difference between classical test theory and item response theory using derived test data. *The Internal Journal of Education and Psychological Assessment, 1*(1), 1-11. https://files.eric.ed.gov/fulltext/ED506058.pdf

Peterson, C. H., Peterson, N. A., & Powell, K. G. (2017). Cognitive interviewing for item development: Validity evidence based on content and response processes. *Measurement and Evaluation in Counseling and Development, 50*(4), 217-223. https://doi.org/10.1080/07481756.2017.1339564

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.tb00086.x

Watson, J. C. (2017). Establishing evidence for internal structure using exploratory factor analysis. *Measurement and Evaluation in Counseling and Development, 50*(4), 232-238. https://doi.org/10.1080/07481756.2017.1336931

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

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.

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TEXAS A&M UNIVERSITY COMMERCE

COURSE DESCRIPTION

Catalogue Description of the Course
COUN 613. Advanced Statistical Techniques
Includes a review of introductory statistics, presentation of basic concepts of analyses of variance, advanced correlational methods, and multiple regression, as well as other advanced statistical methods. Focuses on use of the computer for data. Meets requirements for a Level III research tool course. Prerequisite: Level I and Level II research tools or equivalent or permission of the instructor.

General Course Information
Advanced Statistical Techniques is intended to provide graduate students with advanced training statistical techniques and is approved by the Graduate School as a Level III research tool. The emphasis in this course will be upon understanding statistical concepts and applying and interpreting tests of statistical inference. Content will include but not be limited to: data and data files, data screening, scaling, visual representations of data, descriptive statistics, correlation and simple and multiple regression, sampling distributions, and the assumptions associated with and the application of selected inferential statistical procedures (one-way ANOVA, factorial ANOVA, mixed-ANOVA, MANOVA). Computer software, the Statistical Package for the Social Sciences (SPSS; version 24 or higher) will be employed to assist in the analysis of data for this course. Students should have access to a computer, SPSS software, and the Internet. This 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 613

Doctoral Standard	Learning Activity	Assignment	Assessment Rubric	Benchmark
6.B.4.a. research designs appropriate to quantitative and qualitative research questions	•Lecture (weeks 1, 4, 5, 7-14) •Readings (Field, 2018 [Chapters 1, 8 -10, 12-17]; Hays, 2011; Trusty, 2011; Levers et al., 2008) • Website (http://www.balkinresearchmethods.com) •In-class Demonstrations (weeks 4, 5, 7-14) •Class discussion (weeks 1, 4, 5, 7-14)	1. Homework Assignments 1-4 2. In-class Presentation	1. n/a 2. In-class Presentation rubric	1. ≥ 80% will score ≥ 80% on homework assignments 1-4 2. ≥ 80% of average rubric scores will either meet (2) or exceed (3) expectation
6.B.4.b. univariate and multivariate research designs	•Lecture (weeks 4, 5, 7-14) •Readings (Field, 2018 [Chapters 8-10, 12-17]; Trusty, 2011)	1. Homework Assignments 1-3 (univariate) and 4 (multivariate)	1. n/a	1. ≥ 80% will score ≥ 80% on homework assignments 1-4

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and data analysis methods	• Website (http://www.balkinresearchmethods.com) •In-class Demonstrations (weeks 4, 5, 7-14) •Class discussion (weeks 4, 5, 7-14)	2. In-class Presentation	2. In-class Presentation rubric	2. ≥ 80% of average rubric scores will either meet (2) or exceed (3) expectation
6.B.4.e. models and methods of instrument design	•Lecture (week 6) •Readings (Field, 2018 [Chapter 18]; Lenz & Wester, 2017; Monga, 2009; Lambie et al., 2017; Finn & Tonsager, 1997; Abdullah et al., 1994; Lewis, 2017; and Watson, 2017) • Website (http://www.balkinresearchmethods.com) •In-class Demonstrations (week 6) •Class discussion (week 6)	1. Instrumentation Journal Article Critique	1. Instrumentation Journal Article Critique rubric	1. ≥ 80% of average rubric scores will either meet (2) or exceed (3) expectation

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

I. Data screening procedures as appropriate for each experimental and correlational statistical model
   A. Numerical
   B. Visual
   C. Statistical methods
II. Correlational designs as appropriate to the research questions and hypotheses, using:
   A. Part and partial correlation,
   B. Simple, forced, and hierarchical multiple regression models
III. Experimental designs as they are appropriate to the research questions and hypotheses
   A. One-way ANOVA
   B. Factorial ANOVA
   C. Repeated measures ANOVA
   D. MANOVA with Univariate and Multivariate Post Hoc
IV. Critically statistical outcomes (in the context of Type I and II errors)
   A. Sample size
   B. Robustness
   C. Effect size
   D. Statistical Power
V. Assessments and instruments
   A. Method
   B. Statistical Models
   C. Design
   D. Validation

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E. Scaling and Level of Measurement
F. Reliability and Validity

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, 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 to this, 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 6th 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 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.

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Assignments/Assessments

1. **Four Homework Assignments (200 points total; 50 points each homework assignment):** Four homework assignments with be distributed in D2L throughout the semester (i.e., weeks 5, 8, 12, & 14). Homework will be pertinent to the information covered in class. Although homework assignments are not meant to be cumulative in nature, concepts in statistics does build upon itself. Therefore, knowledge learned in prior weeks will be useful in completing homework assignments. Homework will be released in D2L one week prior to its due date. Class time may be allocated to working on homework assignments. You may rely on your classmates as a resource, but your work is your own and must be submitted independently. Homework assignments may include free response, true/false, and/or multiple choice questions, and/or an APA style write-up for both method and results sections (and inclusion of SPSS output [when applicable]) for various statistics addressed. Note that homework must be submitted before class on the week it is due. The purpose of homework assignments is to demonstrate your knowledge and skill regarding various quantitative, univariate and multivariate research designs and analyses; ability to construct and decipher research questions used in various quantitative research methods, and develop your skills in professional writing suitable for publication.

2. **Instrumentation Journal Article Critique (100 points):** You will provide a critique on an empirical journal article that focuses on instrument design/development and use of exploratory and/or confirmatory validation techniques. The article you select to critique should come from an ACA or ACA-affiliated journal listed in Appendix A. The article critique must include the following: (a) thorough summary of the article; (b) exploration of design and development of the instrument and statistical validation method (i.e., exploratory factor analysis, confirmatory factor analysis); and (c) provide an overall critique of the research and article. The critique (3-5 pages, excluding title page and references) must adhere to the APA 7th edition guidelines, include references and in-text citations, and be written in a professional manner suitable for publication.
Hint: when discussing the various components of the critique and assessing the quality of research conducted, utilize empirical and textbook resources to support your assertions. The goal of this article critique examines your knowledge and skills in areas of instrument design and development, statistical validation methods for instrumentation, and critical analysis and review referred literature. See Appendix B for questions to help guide your article critique. See rubric below.

Instrumentation Journal Article Critique Rubric

	1 – Does not meet Expectation	2 – Meets Expectation	3 – Exceeds Expectation
Appropriate article selected (10 points)	Articles selected do not fit the purpose of this assignment, or only fit a small portion of the	N/A	Articles selected fit the purpose of this assignment (instrument development and

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	assignment. Unable to distinguish between instrument development and validation article and other forms of empirical research articles. (0 – 6.9 points)		validation). Able to distinguished between instrument development and validation article and other forms of empirical research articles (9 – 10 points)
Summarization of the article (20 points)	Demonstrates a lack of knowledge on how to appropriately summarize key components of article. Information of author(s) name, title of article, statement of the problem, purpose of the study, methods, results, discussion of findings, and implications missing or well-underdeveloped. Not representative of doctoral level work. (0 – 15.9 points)	Demonstrates knowledge on how to appropriately summarize key components of article but omits one or two key points in less than three sections identified directly below. Includes summary of basic information such as name of author(s), title of article, statement of the problem, purpose of the study, methods, results, discussion of findings, and implications. Representative of doctoral level work. (16 – 17.9 points)	Demonstrates exceptional knowledge on how to appropriately summarize key components of article with no missing detail. Includes summary of basic information such as name of author(s), title of article, statement of the problem, purpose of the study, methods, results, discussion of findings, and implications. Representative of doctoral level work. (18 – 20 points)
Detailed exploration of instrument design and development and statistical model (30 points)	Little to no exploration of instrument(s) used (design/model). Omitted information related to level of measurement, instrument development steps, review process, norming practices, reliability and validity, etc. Absence of or an underdeveloped summary of statistical validation method. Not representative of doctoral level work. (0 – 23.9 points)	Sufficient exploration of instrument(s) used (design/model). Information included level of measurement, instrument development steps, norming practices, reliability and validity, etc. but missing one or two key elements. Summary of statistical validation method contains depth and is fairly accurate but missing one or two key elements. Representative of doctoral level work.	Sufficient exploration of instrument(s) used (design/model). Information included level of measurement, instrument development steps, norming practices, reliability and validity, etc. with no missing detail. Summary of statistical validation method contains depth and accurate with no missing detail. Representative of doctoral level work. (27 – 30 points)

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		(24 – 26.9 points)	
Critique of research (30 points)	Critique does not include the student's supported opinion surrounding the research conducted and/or development of the article itself. Or, the critique was underdeveloped, with only minimal opinion that is not support with literature. Points made are not grounded with citations. Not representative of doctoral level work (0 – 23.9 points)	Critique includes the student's supported opinion surrounding the research conducted and development of the article itself but missing one or two key elements. Points made are grounded with citations. Representative of doctoral level work. (24 – 26.9 points)	Critique includes the student's supported opinion surrounding the research conducted and development of the article with no missing detail. Points made are grounded with citations. Representative of doctoral level work. (27 – 30 points)
APA Style/Grammar (10 points)	Substantial APA errors (> 6 errors). Overall quality of written work is poor. Not indicative of doctoral level work. (0 – 6.9 points)	Some APA errors (3-4 errors). Overall quality of written work is fair to good. Indicative of doctoral level work. (7 – 8.9 points)	Little to no errors (1-2 errors). Overall quality of written work is good to exceptional. Indicative of doctoral level work. (9 – 10 points)

3. **In-Class Presentation (100 points):** With a partner or independently, you will choose a statistical analysis covered in class (start at week 5, while omitting week 6) and apply it to a research project you create. Although the research project is fictitious in nature, student/partners must address the following areas: scenario of the study, research design, research question(s), description of sample/data, instrumentation (level of measurement, method of development, evidence of reliability/validity, etc.), statistical analysis, step-by-step analysis of data in SPSS (i.e., model assumptions, statistical analysis), interpretation of results, and application to counseling. Please note that students will have to develop their own dataset and choose an instrument/measure [dependent variable(s)] from the professional counseling literature for this project. The goal of this presentation is to demonstrate your knowledge and skill in quantitative research methods and statistics, examine your ability to conceptualize how to apply research to counselor practice, and expand your teaching skills in research and statistics. See rubric below.

In-Class Presentation Rubric

	1 – Does not meet Expectation	2 – Meets Expectation	3 – Exceeds Expectation
Scenario of the Study (5 points)	Minimal to no information provided about scenario; there is	Sufficient information provided about scenario but missing one or two	More than sufficient information provided about scenario with no

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	no context behind the data; not representative of doctoral level work (0 – 3.9 points)	key points; data being analyzed has context; representative of doctoral level work (4 – 4.4 points)	detail missing; data has complete context; representative of doctoral level work (4.5 – 5 points)
Research Design (e.g., correlational, pre-experimental, experimental) (5 points)	Description of research design was insufficient or was incorrect; no evidence of knowledge about research design and not rationale provided; not representative of doctoral level work (0 – 3.9 points)	Description of research design was sufficient but missing one or two key points; evidence of knowledge about research design was present and partial rationale was provided; representative of doctoral level work (4 – 4.4 points)	Description of research design was sufficient with no missing key points; clear evidence of knowledge about research design and rationale was provided; representative of doctoral level work (4.5 – 5 points)
Research Question(s) (10 points)	Presentation did not include a research question; research question did not align with the research design, variables (IV/DV) of the study, or statistic; no evidence of knowledge concerning types of research questions in quantitative designs; not representative of doctoral level work (0 – 7.9 points)	Presentation include a research question but missing one or two elements; research question aligns with the research design, variables (IV/DV) of the study, and statistic; evidence of knowledge concerning types of research questions in quantitative designs; representative of doctoral level work (8 – 8.9 points)	Presentation included a research question with no missing elements; research question aligns with the research design, variables (IV/DV) of the study, and statistic; clear evidence of knowledge concerning types of research questions in quantitative designs; representative of doctoral level work (9 – 10 points)
Description of Sample/Data (5 points)	Description of sample was insufficient or omits key points such as number of participants, demographics, descriptive statistics, etc.; not representative of doctoral level work (0 – 3.9 points)	Description of sample was sufficient but omits one or two key points (e.g., number of participants, demographics, descriptive statistics); representative of doctoral level work (4 – 4.4 points)	Description of sample was sufficient with no key points missing; elements clearly addressed include number of participants, demographics, descriptive statistics, and so forth; representative of doctoral level work (4.5 – 5 points)
Instrumentation (10 points)	Description of instrument (dependent variable) was	Description of instrument (dependent variable) was sufficient and includes	Description of instrument (dependent variable) was

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	insufficient or omits key points of level of measurement, reliability/validity, scoring, scaling, design elements, etc.; not representative of doctoral level work (0 – 7.9 points)	level of measurement, reliability/validity, scoring, scaling, design elements, etc. but missing one or two key elements; representative of doctoral level work (8 – 8.9 points)	sufficient and includes level of measurement, reliability/validity, scoring, scaling, design elements, etc. with no missing detail; representative of doctoral level work (9 – 10 points)
Statistical Analysis (5 points)	Statistical analysis was not described; no rationale provided for chosen analysis; or analysis did not fit the data, research question, or design; not representative of doctoral level work (0 – 3.9 points)	Statistical analysis was described in some detail; partial rationale provided for chosen analysis; analysis fit the data, research question, or design; representative of doctoral level work (4 – 4.4 points)	Statistical analysis was thoroughly described with no missing detail; rationale provided for chosen analysis was clear; analysis fit the data, research question, or design; representative of doctoral level work (4.5 – 5 points)
Step-by-step Demonstration in SPSS (30 points)	Demonstration omits critical steps (e.g., descriptive, model assumptions, etc.) or presenter appears unrehearsed; not representative of doctoral level work (0 – 23.9 points)	Demonstration includes most critical steps (e.g., descriptive, model assumptions, etc.); presenter appears rehearsed; representative of doctoral level work (24 – 26.9 points)	Demonstration includes all critical steps (e.g., descriptive, model assumptions, etc.); presenter appears well-rehearsed; representative of doctoral level work (27 – 30 points)
Interpretation of SPSS output (10 points)	Interpretation of SPSS output was incorrect or areas of SPSS output were interpreted incorrectly; not representative of doctoral level work (0 – 7.9 points)	Interpretation of SPSS output was correct but missing one or two key points; representative of doctoral level work (8 – 8.9 points)	Interpretation of SPSS output was correct with no missing information; representative of doctoral level work (9 – 10 points)
Application of findings to counseling (10 points)	No discussion of applying results to counseling or discussion provided was unrelated to counseling; not representative of doctoral level work (0 – 7.9 points)	Discussion of applying results to counseling was sufficient but missing one or two key points; discussion provided was related to counseling; representative of doctoral level work (8 – 8.9 points)	Discussion of applying results to counseling was thorough and specific to the research being conducted; discussion provided was clearly related to counseling; representative of doctoral level work (9 – 10 points)

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Presentation and Presenter Qualities (10 points)	Information provided appears disorganized/ disjointed; presenter appeared unrehearsed; proposal quality was inappropriate for doctoral level work; scholarly sources not utilized (0 – 7.9 points)	Information provided appears fairly organized; presenter appeared rehearsed but missed one or two key points; proposal quality was appropriate for doctoral level work; some scholarly sources utilized (8 – 8.9 points)	Information provided appears well organized; presenter appeared rehearsed; proposal quality was appropriate for doctoral level work; 7+ scholarly sources utilized (9 – 10 points)

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**
Homework Assignments	200
Instrumentation Journal Article Critique	100
In-class Presentation	100

Total points possible = 400. Your Final Grade is determined adding the point values earned from each assignment and dividing by 400. The resulting value is multiplied by 100 to yield a percentage. For example: (340 [points earned]/400) X 100 = 85%

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

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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

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Device	Operating System	Browser	Supported Browser Version(s)
			latest minor or **point** release of that major version). For example, as of June 7, 2017, D2Lsupports 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:
  - 512 MB of RAM, 1 GB or more preferred
  - Broadband connection required courses are heavily video intensive
  - 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:
  - Sound card, which is usually integrated into your desktop or laptop computer
  - Speakers or headphones.
  - *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.

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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/
  - 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**.**

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.

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 LiveChat

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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

[Example]

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.

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

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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

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

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TEXAS A&M UNIVERSITY COMMERCE

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

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.

[Example] COURSE OUTLINE / CALENDAR

Course Calendar

Date	Topic	CACREP Standard(s)	Readings	Assignments
Week 1	-Introductions -Course Overview and Expectations -Differences Between Quantitative and Qualitative Research Designs and Research Questions -Review of Basic	6.B.4.a.	-Field (2018) Chapter 1: Introduction to statistics (Basic Concepts) … -Hays (2011) Infusing qualitative traditions … -Trusty (2011) Quantitative articles … -Levers et al. (2008) Qualitative research in counseling … -www.balkinresearchmethods.com – "Types of Research"	-Review Syllabus

*[~~semester/year~~Spring, 2022]*The *syllabus/schedule are subject to change.*

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	Statistics			
Week 2	- Review of Basic Statistics Continues -NHST -Effect Sizes -Statistical Power		-Field (2018) Chapter 1: Introduction to statistics (Basic Concepts Cont.)… -Field (2018) Chapter 2: The SPINE of statistics (Central Tendency, Dispersion, NHST, effect size, statistical power) -Field (2018) Chapter 3: The phoenix of statistics (NHST) -Balkin & Sheperis (2011) Evaluating and reporting statistical power in counseling research -Watson, Lenz, Schmit, & Schmit (2016). Calculating and reporting estimates of effect size -www.balkinresearchmethods.com – "Measures of Central Tendency" and "Measures of Variability" -www.balkinresearchmethods.com – "G*Power: Demonstration tutorial"	
Week 3	-Exploring SPSS -Exploring Data With Graphs -Model Assumptions		-Field (2018) Chapter 4: The IBM SPSS statistical environment -Field (2018) Chapter 5: Exploring data with graphs -Field (2018) Chapter 6: Beast of bias -www.balkinresearchmethods.com – "Model Assumptions in ANOVA"	
Week 4	-Correlation review and Simple Regression -correlation research questions -Class time for	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 8: Correlation -Field (2018) Chapter 9: The linear model (simple regression) -Trusty (2011) Quantitative articles … -www.balkinresearchmethods.com	

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	HW1		– "SPSS Tutorial: Simple Linear Regression"	
Week 5	-Multiple Regression -correlation research questions	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 9: The linear model (multiple regression) -www.balkinresearchmethods.com – "Multiple Regression" -www.balkinresearchmethods.com – "SPSS Tutorials: Multiple Regression"	-HW 1 Due
Week 6	-Instrument design, development, and construction -Statistical Models: EFA and CFA	6.B.4.e.	-Field (2018) Chapter 18: Exploratory factor analysis -Lenz & Wester (2017) Development and evaluation of assessments … -Monga (2009) Classical test theory and item response theory … -Finn & Tonsager (1997) Information-gathering and therapeutic models of assessment … -Lambie et al. (2017) Establishing content-oriented evidence… - Abdullah et al. (1994) Modeling in measurement and instrumentation … -Lewis (2017) Confirmatory factor analysis … -Watson (2017) Exploratory factor analysis … -Peterson et al. (2017) Cognitive interviewing for item development … -www.balkinresearchmethods.com – "SPSS Tutorials: Exploratory Factor Analysis"	
Week 7	~~**Spring Break-Comparing Two Means (*t*-test & dependent *t*-test) -experimental research questions -Class time for HW2**~~	~~6.B.4.a. 6.B.4.b.~~	~~**-Field (2018) Chapter 10: Comparing two means -Trusty (2011) Quantitative articles … -www.balkinresearchmethods.com – "SPSS tutorial: Independent t-test" - -www.balkinresearchmethods.com**~~	

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			~~"Dependent t-test" and "SPSS tutorial: Dependent t-test and Cohen's d"~~3/14 to 3/18	
Week 8	-Comparing Several Independent Means (one-way ANOVA) -experimental research questions	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 12: GLM 1: Comparing several independent means -www.balkinresearchmethods.com – "ANOVA Theory" and "One-way ANOVA" -Trusty (2011) Quantitative articles	-HW 2 Due
Week 9	-Factorial Designs -experimental research questions	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 14: GLM 3: Factorial designs -Trusty (2011) Quantitative articles -www.balkinresearchmethods.com – "Factorial ANOVA Theory," "SPSS Tutorial: Factorial ANOVA with a non-significant interaction," and "SPSS Tutorial: Factorial ANOVA with a significant interaction"	
Week 10	-Comparing Adjusted Means (ANCOVA) -experimental research questions	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 13: GLM 2: Comparing means adjusted for other predictors (analysis of covariance) -Trusty (2011) Quantitative articles	-Instrumentation Journal Article Critique due
Week 11	-Repeated Measure Designs -pre-experimental research questions -Class time for HW 3	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 15: GLM 4: Repeated-measures designs -Trusty (2011) Quantitative articles -www.balkinresearchmethods.com – "Repeated Measures ANOVA" and "SPSS Tutorial: Repeated measures ANOVA"	
Week 12	-Mixed Designs -experimental research questions	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 16: GLM 5: Mixed designs -Trusty (2011) Quantitative articles -www.balkinresearchmethods.com – "SPSS Tutorial: SPANOVA"	-HW 3 Due
Week 13	-MANOVA with univariate post hoc -experimental research questions	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 17: MANOVA -Trusty (2011) Quantitative articles -www.balkinresearchmethods.com – "SPSS Tutorial: MANOVA"	

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Week 14	-MANOVA with multivariate post hoc -experimental research questions	6.B.4.a. 6.B.4.b.	-Field (2018) Chapter 17: MANOVA -Trusty (2011) Quantitative articles -www.balkinresearchmethods.com – "SPSS Tutorial: MANOVA" and "SPSS Tutorial: Post hoc Discriminant Analysis"	-HW 4 Due
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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Appendix A

ACA and ACA-Affiliated Journal List

Journal of Counseling & Development (JCD)
Adultspan Journal
The Career Development Quarterly (CDQ)
Counseling and Values (CVJ)
Counselor Education and Supervision (CES)
Journal of Addictions & Offender Counseling (JAOC)
Journal of College Counseling (JCC)
Journal of Employment Counseling (JEC)
Journal of Humanistic Counseling (JHC)
Journal of Multicultural Counseling and Development (JMCD)
Counseling Outcome Research and Evaluation (CORE)
Measurement and Evaluation in Counseling and Development (MECD)
The Family Journal (IAMFC)
Journal of Child and Adolescent Counseling (ACAC)
Journal of Creativity in Mental Health (ACC)
Journal of LGBT Issues in Counseling (ALGBTIC)
Journal of Mental Health Counseling (AMHCA)
Journal of Military and Government Counseling (MGCA)
Journal for Social Action in Counseling and Psychology (CSJ)
Journal for Specialists in Group Work (ASGW)
Rehabilitation Counseling Bulletin (ARCA)
International Journal for the Advancement of Counseling (IJAC)

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Appendix B

Here are some questions that may help you all in your critiques:

1. Are the title and/or abstract of the article appropriate and clear?
2. Is the purpose of the study/article clear?
3. Is the discussion of the findings/content relevant to the study purpose?
4. Have the authors cited essential and necessary literature related to the study topic?
5. Are there any sections of the article that need to be expanded or omitted?
6. Are the authors' ideas and/or statements clear or ambiguous?
7. Are the methods described in detail and are they understandable? Are they correct?
8. Was it clear how the instrument was developed/constructed. Did the author(s) mention anything in regard to theory associated with the instrument being developed. How was the instrument scaled? How was reliability and validity addressed? What processes were used by the authors during the instrument development period
9. What validation method was used (i.e., exploratory, confirmatory). What statistical program was used? Did the author(s) provide a rationale as to how/why certain steps/procedures were used in analyzing the data?
10. How did the authors incorporate research implications? Did they do so appropriately?
11. How would you use the research findings from your article (both clients served and the profession of counseling)?
12. Critique: What is your overall impression of the article? This is probably the most important components of your article critique. Based on what you know, is the article itself well-constructed, useful, related to counseling, and so forth. Also, is the research (instrument design and development, statistical model, measurement properties) rigors and did researcher faithfully conduct the research. Lastly, is the research accurate and would you trust the results. Be sure to support your statements with citations, reaching beyond the textbook.

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