Please, click on the following link to access A&M-Commerce Covid 19 Information, https://new.tamuc.edu/coronavirus/

COUN 613: Advanced Statistical Techniques

COURSE SYLLABUS: Spring 2021

INSTRUCTOR INFORMATION

Instructor: Rebecca G. Judd Ph.D., LCDC, LMSW-IPR
Office Location: Henderson 311
Office Hours: Virtual Office hours are Live in D2L Wed 7:00 -9:00 a.m.
Office Phone: 903-468-8190
Office Fax:
University Email Address: Rebecca.Judd@tamuc.edu
Preferred Form of Communication: **Email**
Communication Response Time: Respond to email queries within 2 business days

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required: Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). Thousand Oaks, CA: Sage Publications.

American Psychological (2018). Publication Manual of the American Psychological Association (7th ed.). Washington D.C., American Psychological Association.

Software Required –

The Statistical Package for the Social Sciences (SPSS, Version 24 or higher) – Premium Grad Pack

The most cost efficient course to purchase and download a license is from https://www.hearne.software/SPSS-Selection ($89 for 12 months and $175 for 2 years) and can be installed on two computers. If you do not buy the Premium version, you will not be able to complete all the assignments for this class. Additionally, SPSS software is available on university computers located in student labs on the Commerce and MPLX campuses.

Optional Texts and/or Materials

- Other readings and resources will be assigned throughout the semester

Course Description

This course includes a review of introductory statistics, presentation of basic concepts of analysis of variance, advanced correlational methods, and multiple regression, as well as other advanced statistical methods; there is a focus on the use of 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 test of statistical inference. Content will include, but not be limited to, data and data files, data screening, scaling, visual representation 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 (including t-tests, chi-square, 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.

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 question and hypotheses using:
  a. Bivariate
  b. Part and Partial Correlation
  c. Simple, standard, stepwise and hierarchical multiple regression models

III.   Experimental designs as they are appropriate to the research questions and hypotheses
  a. One-way ANOVA
  b. Factorial ANOV
  c. Repeated Measures ANOV
  d. MANOVA

IV.   Critically statistical outcomes (in the context of Type I and Type II errors)
  a. Sample size
  b. Robustness
  c. Effect size
  d. Threats to internal and external validity

V.   Assessment and Instruments
  a. Method
  b. Models
  c. Design
  d. Use of Data

Student Learning Outcomes

2009 CACREP Standards Addressed in COUN 613

Standard	Assessment
IV. E.1. Understands univariate and multivariate research designs and data analysis methods	1. Key Assessment 3: In class presentation 2. Homework 2-5 3. Final Quiz
Students will be able to identify, describe and explain univariate and multivariate research designs and data analysis methods.	
IV. E.1. Knows models and methods of instrument design	1. Key Assessment 4: E.F.A. Article Critique 2. Final Quiz
Students will be able to identify, analyze and describe methods of instrument design	

COURSE REQUIREMENTS

Minimal Technical Skills Needed

In this class you will utilize the Learning Management Systems (LMS) D2L for instructional and learning opportunities, submitting your assignments, participating in online synchronous and asynchronous discussions, accessing resources, and completing quizzes/tests. Additionally, knowledge and skills in using Microsoft Word, PowerPoint, Excel, and the SPSS statistical package are necessary to be successful in this course. If you have any issues with using the various systems or software, it is your responsibility to contact support services and to notify the instructor of the problem.

Instructional Methods

This course will be delivered via synchronous and asynchronous sessions via D2L and will consist of live class sessions, pre-recorded lectures, group engagement activities, various assignments with some including experiential learning and practical application of the content areas. In addition, small lectures, discussion activities and workshops may be utilized to provide instruction during this course.

Student Responsibilities or Tips for Success in the Course

As a student in this course you are responsible to engage in active learning and reaching out to the instructor if there are problems or challenges that is interfering in optimal learning. Communication is key when engaged in a fully online, virtual environment.

Expectations for success include:

1. Always demonstrate professional behavior, including demonstrating respect for instructor and peers; being open to feedback and guidance throughout this class and in the program.
2. Adhered to the university student code of conduct.
3. Begin reading the assigned text and supplemental readings as soon as possible, with a focus on completing all readings prior to engagement with instructor or peers.
4. Prepare to engage in live class sessions, discussions, and other activities so you can be a contributor as well as receiver of knowledge and skills.
5. Actively participate in engagement activities which will include live virtual class sessions, online discussions, and interactive learning opportunities -as this if vital for learning and success in both this course and the program.
6. Work ahead when possible, completing assignments ahead of due date so you are prepared to submit on the due date.
7. Sign into the D2L course multiple times during the week to access updated announcements or posted resources.
8. Check your university email daily. This is the official method of communication by the university, department, and instructor.
9. Be open and focused on the "process" and not the "product" as earning this degree requires time, effort, work and ultimately growth in knowledge, skills, abilities along with personal and professional attributes.

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GRADING

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

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

Homework Assignments (5)	100 pts
Exploratory Factory Analysis Article Critique (Key Assessment 4)	50 pts
Class Presentation (Key Assessment 3)	100 pts
Total available	250 pts

Assessments
Homework Assignments (5 total) [20 pts each]

Five homework assignments will be distributed in D2L throughout the semester. Each assignment will reflect knowledge and information covered in the pre-recorded lectures and synchronous classes. The homework assignments provide an assessment of knowledge, skills and understanding of the various research designs, corresponding statistical analyses and professional writing skills (level for publication).

All homework assignments will be due by 11:59 p.m. on the Sunday of the week it is due

A complete submission will include an APA write up for both method and results sections and SPSS output (when applicable). *Students can use each other as a resource for working through the assignments, but each submission must be your own and submitted independently*

Grading Rubric in Appendix A of syllabus and located in D2L under Course Resources Tab

Exploratory Journal Article Critique (Key Assessment 4) [50 pts]

(3-5 pages, APA 7th edition standards, include references and in-text citations and written in a professional manner suitable for publication)

You will compare and contrast two empirical journal articles, one that uses exploratory *factory analysis (EFA)* and the other that uses a *phenomenological approach* from any ACA journal listed in Appendix B (list also located in D2L under Course Resources Tab)

This assignment assesses your knowledge and skills in differentiating between qualitative and quantitative research and facilitating an exploration of instrument design and methods of assessment.

The article critique must address research methodology (e.g., design, analysis, instruments [when applicable], trustworthiness [when applicable], internal validity, presentation of results and procedures/data collection. In addition, you will provide a summary of the article, describe its purpose, and give your overall impression of the quality of the research conducted.

Hint: When addressing the various component of the critique and assessing the quality of the research conducted, utilize empirical and textbook resources to support your assertions.

Grading Rubric in Appendix B of syllabus and located in D2L under Course Resources Tab).

In-Class Presentation (Key Assessment 3) [100 pts]

Each student will choose a statistical analysis covered in class and apply it to a research project they create. The project must include a scenario of the study, description of the instrument/measure used, identification of the research design, description of the sample and step-by-step analysis of data in SPSS (i.e. model assumptions, statistical analysis, and interpretation of results).

This assignment assesses student's knowledge and skills in research methods and statistics, as well as the ability to conceptualize how to apply your research findings to counselor practice

* Students will develop their own dataset and instrument/measure [dependent variable(s)] for the research project.

Grading Rubric in Appendix C of syllabus and located in D2L under Course Resources Tab).

TECHNOLOGY REQUIREMENTS

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All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:
https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

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

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. Other support options can be found here:

https://community.brightspace.com/support/s/contactsupport

Interaction with Instructor Statement

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

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: https://www.britannica.com/topic/netiquette

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

[Undergraduate Student Academic Dishonesty Form](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf)

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf

[Graduate Student Academic Dishonesty Form](http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf)

http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf

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

Students with Disabilities-- ADA Statement

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
Velma K. Waters Library Rm 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/)

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

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.

Department or Accrediting Agency Required Content

COURSE OUTLINE / CALENDAR