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EDCI 699 Statistics: Content, Process, Application

COURSE SYLLABUS: Spring 2022

INSTRUCTOR INFORMATION

Instructor: Dr. Karyn Miller, Ph.D

Office Hours: I will be available by appointment.

University Email Address: Karyn.Miller@tamuc.edu

Preferred Form of Communication: Email

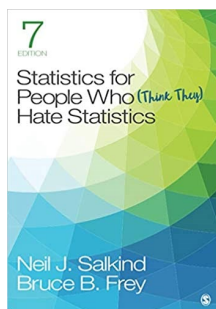
Communication Response Time: 48 hours maximum (Monday-Friday)

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required

Salkind, N. (2017) *Statistics for People Who (Think They) Hate Statistics* (6th or 7th edition). Sage Publications, ISBN-13: 978-1506333830.



Other Readings

Other readings will be made available throughout the semester as needed.

The syllabus/schedule are subject to change.

Software Required

SPSS Computer Package. SPSS Statistical software (version 19.0 or higher are recommended). Be sure that you choose the Statistics Standard Grad Pack, not the Base Grad Pack. You can get a 6 month or 12 month license. The software is also on the computers in the student lab at the Metroplex.

There are many options for purchasing this software. For example, <https://studentdiscounts.com/product/ibm-spss-statistics-grad-pack-27-0-standard-6-month-windows-or-mac-download-install-on-up-to-2-computers/>

Optional Texts and/or Materials

Calculator (a basic calculator with a square root function will suffice, most smart phones have this tool)

Course Description

This course is intended to provide graduate students with an introduction to statistics and is approved by the Graduate School as a Level II research tool. The emphasis in this course will be on 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 regression, sampling distributions, and the assumptions associated with and the application of selected inferential statistical procedures (including t-tests, chi-square, and one-way ANOVA). Computer software (SPSS) 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.

This course will meet at the Metroplex.

Student Learning Outcomes

By the end of this course, students will be able to:

1. Describe and explain basic statistical concepts such as probability distribution, hypothesis testing, statistical significance, and how data collection affects inference.
2. Formulate and test hypotheses using statistical models
3. Apply appropriate statistical methods to real world research questions
4. Read and interpret results from quantitative research studies
5. Understand how to manage data, run data analyses, and interpret output in (SPSS).

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COURSE REQUIREMENTS

Minimal Technical Skills Needed

Access to a Computer with:

- Internet Access
- Microsoft Word Processing Software
- Microsoft Power Point Software
- Adobe or Foxit Reader to open PDF File
- SPSS

Instructional Methods

This online course includes lectures, assigned readings, quizzes, and application of concepts to real-world questions using the statistical software program SPSS.

Student Responsibilities or Tips for Success in the Course

Students are responsible for engaging in their own learning. This includes being aware of and meeting deadlines, checking class emails, asking questions to clarify understanding, and actively participating in course activities.

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

Weights of the assessments in the calculation of the final letter grade.

Quizzes	15%
Discussion question	10%
Practice sets	30%
Midterm Exam	20%

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Final Exam	25%
TOTAL	100%

Assessments

- **Reading quizzes:** Short reading quizzes will be due for each unit.
- **Discussion questions:** For each unit, students are required to write and submit one discussion question. This question should address a point of confusion, an area that requires further clarification, or questions about application.
- **Practice Sets:** Practice sets will include working through problems from the text, applying concepts to real-world problems, or running and interpreting some form of data using SPSS.
- **Midterm Exam:** Will be cumulative to that point, open book and notes.
- **Final Exams:** Will be cumulative, open book and notes.

TECHNOLOGY REQUIREMENTS

LMS

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

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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

You should expect responses to questions and concerns posted in my virtual office or sent by email within 48 hours. In most cases, I respond within 24 hours. Please email me only for personal concerns. Questions about the class should be posted in my virtual office for the benefit of the class.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

This course allows students to work through each unit at their own pace. However, all assignments, quizzes, and discussion board posts must be submitted by the due date. No late work will be accepted after the due date except for in extenuating circumstances. Examples of extenuating circumstances include a verified illness, death in a student's immediate family, and obligation of a student at legal proceedings in fulfilling responsibility as a citizen. Documentation is required to be granted an exception to the late work policy. Make-up work, re-writes, and extra credit are not permitted.

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:

<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>

[Graduate Student Academic Dishonesty Form](#)

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

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

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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/>

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.

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COURSE OUTLINE / CALENDAR

Unit	Weeks	Topic
1	1	Introduction to statistics and SPSS
2	2-3	Descriptive statistics: Measures of central tendency and dispersion
3	4-5	Descriptive statistics: Data visualization & Correlation
4	6-7	Introduction to hypothesis testing
	8	MIDTERM EXAM
5	9-10	Inferential statistics: statistical significance and the one-sample z test
6	11-12	T-tests for independent and dependent means
7	13-14	ANOVA & Correlation coefficient
	15	FINAL EXAM

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