



COURSE PSY, 302, 51E, Statistics and Research Design I

COURSE SYLLABUS: Fall 2024

Mon 4:30p-7:10p

INSTRUCTOR INFORMATION

Instructor: Leon King, MS, COTA

University Email Address: Leon.King@tamuc.edu

Preferred Form of Communication: E-mail or via ZOOM

Communication Response Time: 24 hours Monday through Friday and 48 hours on weekends

Office Hours: Mondays and Thursdays from 3:00 – 4:15 in the TAMU-C office at CHEC

Lab Instructor: Zane Brand

Office Location: Binnion 211

Office Hours: flexible - email for Zoom appointment

University Email Address: Zane.Brand@tamuc.edu

Preferred Form of Communication: email.

Communication Response Time: 24 – 48 hours

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Gravetter, F. J., Wallnau, L. B., Forzano, L. A. B., & Witnauer, J. E. (2021). *Essentials of statistics for the behavioral sciences*. Cengage Learning.

ISBN: 987-0-357-36529-8

Tcherni-Buzzeo, M. & Pyrczak, F. (2024). *Evaluating Research in Academic Journals: A Practical Guide to Realistic Evaluation*. Routledge.

ISBN: 978-1-03-242409-5

The syllabus/schedule are subject to change.

Course Description

This course is the first part of a two-part series on statistics and research design. The purpose of this course is to introduce you to the basic and most common methods of collecting psychological data. We will cover ethics in research, the concepts of reliability, validity, generalizability, measurement, descriptive statistics, probability, z-scores, and the fundamentals of experimental design. Special attention will be given to writing in the style of the American Psychological Association.

The lab allows for additional time to discuss the materials covered in lecture and to work on applying what you have learned in lecture through developing a research paper. This research paper will be a hypothetical replication study. This project is also broken up into two semesters. This semester you will write a literature review including method and expected results sections. Each week in the lab you will be working on a particular portion of your research paper. All of this will culminate in an APA style research paper.

Student Learning Outcomes

1. Learning to review the primary literature (improving library research skills, increasing familiarity with scientific writing, and reading journal articles)
2. Learning how research ideas are developed, including the formulation of testable hypotheses.
3. Analyzing research results, including a basic understanding of descriptive statistics, probability, and percentiles
4. Producing a quality APA style report

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Students will need to be able to utilize the learning management software D2L independently to be successful in this course. Additionally, students will need to have a working knowledge and understanding of how to utilize Microsoft Office including MS Word, Excel, and PowerPoint. Finally, the student must also be able to access and utilize e-mail effectively to meet the technical standards for this course.

Instructional Methods

The lecture portion of this class will be held in person, (face-to-face), at the CHEC TAMU-C campus in McKinney, TX. Your lab portion of the class will take place through synchronous learning via ZOOM immediately following lecture. **THIS LAB IS MANDATORY.** Therefore, I strongly recommend that you remain at the CHEC location following the lecture portion of the class until the lab is complete. With that said, lectures will not be held on exam days, therefore, if your lab instructor plans on having lab on

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exam days, you are welcome to join lab via ZOOM from home as you are not required to be at the CHEC location to sign into ZOOM. Student Responsibilities or Tips for

Student Responsibilities or Tips for Success in the Course

. Questions about Grades

Any questions about a grade for a particular assignment or exam should be brought to the professor's attention within one week of the grade being posted in D2L.

The following are helpful hints to be successful in this course:

1. Check and read class emails promptly for announcements, updates, clarifications, etc.
2. Take notes and participate in lectures, read the assigned parts of the textbook to check if your listening comprehension matches the textbook descriptions, and fill in the missing pieces.
3. Quiz yourself often. Can you define a concept in your own words? Can you answer 3 or 4 questions of the textbook practice questions correctly?
4. Review the materials on a regular basis. Consider setting aside 20-25 minutes every two days to quiz yourself and work on a few problems for each of the chapters covered in class to ensure that you can apply correct formulas and work the formulas correctly.
5. Complete lecture and lab assignments including exams by the due dates.

Ask questions as early as you can! Please feel free to contact me any time you have questions. I made a rule for myself, and I would like you to follow it. If I spend an hour on something, and really give it my all, but I still can't get it, it's time to ask for help. Don't be afraid to ask for help! Don't just sit there getting frustrated!

Take notes: Take GOOD notes while you read. It is a good study habit to go over your notes at the end of each week, filling in the blanks from the supplemental video(s) and assignment. It is also a good idea to make friends in the course and get the phone numbers of a couple of people who you can share notes and study with.

Utilize D2L: All submission of graded material is to be completed in D2L. Email submission will not be accepted. Please take some time to familiarize yourself with the system and contact me or IT with questions in advance.

Broken Link Policy: Online content is checked in advance, but in rare cases a link may stop working mid-week. If a link is no longer working, notify the instructor immediately and no later than 24 hours prior to the chapter due date. Any broken links will be remedied and announced in D2L, and therefore no adjustments will be made to student grades if this occurs.

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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

Assessments

Your final grade is weighted 80% lecture and 20% lab. However, to receive a C or better in the course, students MUST receive a grade of C or better in BOTH the lecture and lab sections. Students who receive less than a C in either the lecture or lab will receive either an automatic D in the course, or their earned course grade if lower than a D.

The lab and lecture grades are further broken up into separate assignments. The contribution of each assignment will be to the corresponding category (lecture or lab).

An important note about grading:

Professor King has nothing to do with your lab assignments or lab grade, so please do not contact Professor King regarding any part of the lab components of this course. Likewise, Mr. Brand has nothing to do with your lecture assignments or grade, so please do not contact Mr. Brand about the lecture components of this course.

Lecture

Exams (30%) – There will be a total of four exams in this class, each worth 10% of the student's final grade. Each exam will cover about four chapters and will be noncumulative, however it is worth noting that with statistics, the processes that you learn in one area moves with you to the next content area. For this reason, if a student is struggling with one topic, it is highly advised that the student seek help early, as the content builds on itself rapidly. Exams will open starting at midnight on the day of class in which there is an exam and students will have until 11:59 that night to complete the exam. The student will have two chances on each exam with the highest exam counted in D2L. If a student elects to retake an exam, (on the same day, exam day, and ONLY on exam day), the student will only have to retake the questions he/she missed on the first attempt). Exams will be timed, and students

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will have 120 minutes on each attempt at their exam. For this reason, there will be

no lectures on exam days! Your job on exam days is simply to take your time and do well on the exams! **There will be no makeup exams unless the instructor has been notified and arrangements have been made in advance! There will be no after the fact make up exams.**

Annotated Bibliography (20%) – This assignment and your critically appraised topic will be done in groups with the same group members. Group size will be limited to two students per group in most cases unless the class has an uneven number of students. Each group will select a case study based on a psychological condition that is found in the DSM V-TR and two current treatment approaches used to treat the selected diagnosis. Once the group members have selected their diagnosis. There will be no repeats of mental health conditions. Throughout the semester, each student will read a total of 5 journal articles on their selected mental health condition and treatment strategy. Therefore, a group of 2 students will draft a final annotated bibliography of 10 journal articles. As the students read each of the journal articles, the student will annotate the significant findings from each of their chosen journal articles in approximately 200 - 300 words. For the purposes of this assignment, a “journal article” is a peer-reviewed article found in a professional journal that has been located through the library database. Therefore textbooks, websites, blogs, and magazine articles will not count as a “Journal.”

Critically Appraised Topic (CAT) (30%) – From the total number of journal articles cataloged in your groups annotated bibliography, (in most cases 10 journal articles), the student will then further refine their articles to their best 6 articles on their chosen mental health diagnosis and treatment modality. Using these 6 articles, the student will formulate a Patient Intervention Comparison Outcome, (PICO) question. Based on the student’s formulated PICO question, the student will then critically appraise their 6 journal articles analyzing the data/statistics within each of the articles and determine, based on the current literature the student has, if the treatment supports or does not support the current patient/client needs.

In Class Group Statistics Assignments (20%) – During class, students will be assigned randomly to groups each week, (learning communities). During these times, students will be assigned certain problems to solve and then write out and solve the problems for the class. As a class, we will re-work the problems and see if the group solved the problems correctly. If the group did not solve the problems correctly, as a class, we will guide the group towards the correct answer. **These will be your notes to study from and a set of problems for you to study at home.** You will scan these notes in with all group members’ names on them and submit a copy to the instructor in D2L. **THESE ASSIGNMENTS ARE pass/fail. If a student does not attend class, that student will earn a zero for that week’s assignment unless the student has an excused absence and has informed the instructor in advance. IN THE LATTER CASE, the highest grade that can be earned is a 70 for that week’s assignment.** Each student is provided with one “get out jail free” pass, in other words, every student is allowed to miss lecture one time with no penalty in

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which I will drop a missed class attendance/in class assignment. This drop will be for either excused or unexcused absence.

Lab

Labs take place on Mondays after lecture. All lab assignments are due the following Monday.

LA 1: Pick a Topic (5%) – Students must pick one of the articles from the list. This assignment is graded pass/fail.

LA 2: List of Five Articles (5%) – Students will submit a list of five articles relevant to the paper they are replicating. These articles will likely be the ones later included in your literature review. This assignment is graded pass/fail.

LA 3: Ethics Training (10%) – Students will complete the CITI ethics training. This assignment is graded pass/fail.

LA 4: Article Review Template (5%) – Students will read an article and complete the article review template. General feedback will be provided to help make sure you are on track.

LA 5: Summarize an article (10%) – Students will summarize one of their articles and submit it for feedback. This assignment will help make sure you are summarizing and paraphrasing correctly before you go any further with your literature review. This assignment is graded pass/fail. General feedback will be provided to help make sure you are on track.

LA 6: Literature Review Outline (5%) – Students will submit an outline for their literature review. This assignment is graded pass/fail.

LA 7: Literature Review (20%) – Students will conduct a brief APA style literature review. This will later serve as the introduction to your paper. Your paper must include 6 or more references; all should be from reputable scholarly sources and all your references must primarily contain reports of empirical research. Note that the article you are replicating is included in this number. No secondary sources may be included. Your paper must be double-spaced in MS Word with 12 pt. Times New Roman font and 1" margins on all 4 sides. Your paper must be 5-7 pages long (this includes your title page and reference pages). Some feedback will be provided, and you are expected to make changes to the introduction of your final paper accordingly.

LA 8: Hypotheses and Expected Results section (5%) – Students will write the hypotheses and expected results section as if this were a proposal.

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LA 9: Operational Definitions and Data spreadsheet (5%) – Students will list and operationally define all variables in their study. They will also create a data spreadsheet that could be used for recording data for the experiment. The purpose of this exercise is to get students to think about what the data should look like for their project. Students will write three lines of fictitious data to aid this process. This assignment is graded pass/fail

LA 10: Participants Section (5%) – Students will write and submit a participant's section for their study. This assignment is graded pass/fail. General feedback will be provided to help make sure you are on track.

LA11: Methods Section (25%) – Students will submit their methods section, and all previous sections. Any recommended edits to the previous sections should appear in this version.

Guidelines for Homework and Lab Assignments:

1. Assignments are to be turned in by 11:30pm on the due date.
2. I will accept emailed assignments on an emergency basis only.
3. Assignments sent by email must be received before 11:30pm on the due date.
4. **ABSOLUTELY NO LATE ASSIGNMENTS** will be accepted. If your assignment is more than 30 minutes late you will earn 0 points for that assignment.
5. Assignments are intended to be completed individually.
DO NOT WORK TOGETHER ON ASSIGNMENTS.

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

Zoom Video Conferencing Tool

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https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

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.

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>

COMMUNICATION AND SUPPORT

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

COURSE AND UNIVERSITY 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 can be found at <https://www.tamuc.edu/student-code-of-conduct/>.

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If you believe someone has engaged in behaviors that do not align with the Code of Student Conduct or you have other concerns, please visit the File a Report page at <https://www.tamuc.edu/office-of-student-rights-and-responsibilities/concerns-incident-reporting/>

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>

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 student academic dishonesty policy
[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

Undergraduate student academic dishonesty policy
[Undergraduate Student Academic Dishonesty Form](#)

Graduate student academic dishonesty policy:
<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesProcedures/13students/graduate/13.99.99.R0.10.pdf>

Graduate student academic dishonesty form:
<https://inside.tamuc.edu/academics/graduateSchool/faculty/GraduateStudentAcademicDishonestyForm.pdf>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage.

Artificial Intelligence

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, Chatbots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

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Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

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 Services
Velma K. Waters Library- Room 162

Phone (903) 886-5930

Fax (903) 468-8148

Email: StudentDisabilityServices@tamuc.edu

Website: <http://inside.tamuc.edu/campuslife/campusServices/StudentDisabilityServices/default.aspx>

Mental Health and Well-Being

The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.



A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling

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Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

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

Week:	Date:	Topic:	Readings:	Assignment:
1	8/25 – 8/31	Introduction to Stats, Searching for Articles	Ch. 1, EOS, Reading in D2L	
2	9/1 – 9/7	Labor Day – No Class		
3	9/8 – 9/14	Frequency Distribution, Research Appraisal	Ch. 2, EOS, Ch 1 – 3 ERJ	
4	9/15 – 9/21	Test 1		DSM V-TR Topic Selection Due
5	9/22 - 9/28	Central Tendency, Evaluating Abstracts	Ch. 3, EOS, Ch. 4, ERJ	
6	9/29 – 10/5	Variability, Evaluating Introductions/Abstracts	Ch. 4, EOS, Ch. 5, ERJ	
7	10/6 – 10/12	Evaluating Samples, Understanding Context	Ch. 6 ERJ, Ch. 7 ERJ	
8	10/13 – 1/19	Test 2		
9	10/20 – 20/26	Z-Scores, Evaluating Measures	Ch. 5, EOS, Ch. 8, ERJ	
10	10/27 – 11/2	Probability, Evaluating Experimental Procedures	CH. 6, EOS, Ch. 9, ERJ	Annotated Bibliography Due
11	11/3 – 11/9	Probability and Sampling, Evaluating Analysis and Results	Ch. 7, EOS, Ch. 10, ERJ	
12	11/10 – 11/16	Evaluating Methods (Quantitative), Evaluating Methods (Mixed Methods)	Ch. 11, ERJ, Ch. 12, ERJ	
13	11/17 – 11/23	Test 3		
14	11/24 – 11/30	Evaluating Discussion Section, Evaluating Systematic Reviews	Ch. 13 ERJ, Ch. 14 ERJ	
15	12/1 – 12/7	In class preparation for CAT and review of material learned		

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16	12/7 – 12/14			CAT Report and Presentations due
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