



PSYC 5302: STATISTICS

CONTACT INFORMATION

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Office Hours: 10-12 Tuesdays and Thursdays, ST 311Q

COURSE DESCRIPTION

PSYC 5302 Statistics. This course will provide a theoretical background and practical experience to statistics for psychology and other behavioral sciences. Statistics are the tools we use to summarize and describe the world around us and to explore the causal processes at work. Understanding statistics and how they are used and misused is vital to assimilating information as an informed citizen, as well as pursuing a career in the behavioral sciences or similar fields. In this course will cover topics including: principles of measurement, measures of central tendency and variability, probability and distributions, correlation and regression, hypothesis testing, t-tests, analysis of variance, and chi-square tests. You will learn and use computer programs to help you understand and perform select statistical analyses.

REQUIRED TEXTS

Navarro, D., Foxcroft, D., & Faulkenberry, T. (2019). **Learning statistics with JASP: A tutorial for psychology students and other beginners.**

<https://tomfaulkenberry.github.io/JASPbook/index.html>

Clyde et al. (2022) **An Introduction to Bayesian Thinking.**

<https://statswithr.github.io/book/>

Additional Readings

- You will be provided with supplemental readings through Blackboard that will help you understand different topics.
- You will be expected to **find** readings on your own as a part of your assignments. These must come from *peer-reviewed* sources. If you cannot find a PDF of the article, interlibrary loan can usually locate it for you.

OBJECTIVES

- Design experiments with statistics in mind
- Become proficient in using software for statistical analysis
- Identify best practices and common misuse of data
- Apply the appropriate statistical tests to novel data sets
- Have broad familiarity in statistical approaches to different kinds of data from broad disciplines in psychology

LATE WORK

Due dates and times are clearly listed on every assignment. In general, **work for the week is due by class time on Monday of the following week.** Work turned in after the due date and time is considered late and will not be accepted. No exceptions. If you have an emergency situation, notify me ASAP for consideration, and include any necessary documentation. This is a basic time-management skill you must learn to succeed in college and in life. Make a schedule, work ahead; you've got this!

GRADES

- All assignments will be submitted through blackboard, and instructions/rubrics will be available on blackboard unless otherwise noted.

Your final grade in this class will be calculated as a simple average: your points earned divided by the maximum number of points you could have earned. Keep up with your grades so that you know where you stand in the class.

In this class you can earn up to a **total of 100 points.** See the course calendar for points available for each assignment.

A = 100-90 Points

B = 80-89 Points

C = 70-79 Points

D = 60-69 Points

F = 59 and fewer Points

Graded Items:

Class Analyses: 10, 2 points each

Experiment Proposals, 10, 4 points each

Mid-term Exam, 20 points

Final Exam, 20 points

QUALITY OF WRITTEN WORK

All written work should be academic quality submitted in APA format in order to expect full credit.

WITHDRAWAL POLICY

Any withdrawals after the last day for an automatic "W" date established by the university will receive the grade of "F".

TYPES OF ASSIGNMENTS

Assignments in this course fall into three categories:

1. Class analyses. For each statistical test we discuss, we will analyze data from a data set and you will produce an APA style results section to turn in to demonstrate that you can successfully conduct this analysis.
2. Experiment proposals. For each of the statistical tests we discuss, you will develop an experiment proposal appropriate to the topic of the week. We will choose one proposal to discuss in class.
3. Exams. We will have a midterm and a final exam, which may consist of assessment of concepts for that unit but will primarily focus on your ability to identify the appropriate statistical test for a given data set and carry out an analysis of that data.

Week	Topic	Assignments and Key Dates
8/26/2024	Overview, Designing Experiments, Ethical concerns with Statistics	
9/2/2024	Getting started with JASP	<i>Labor Day Monday</i>
9/9/2024	Correlation and Regression	Analysis and Proposal 1 Due 9/16
9/16/2024	NHST, Error, Sampling Distributions	
9/23/2024	T-tests	Analysis and Proposal 2 Due 9/30
9/30/2024	Nonparametric tests	Analysis and Proposal 3 Due 10/7
10/7/2024	One-way ANOVA and Post hoc tests	Analysis and Proposal 4 Due 10/14
10/14/2024	Factorial ANOVA	Analysis and Proposal 5 Due 10/21, Mid Term Due 10/21, Armadillo Friday
10/21/2024	Repeated Measures ANOVA	Analysis and Proposal 6 Due 10/28
10/28/2024	ANCOVA, MANOVA, MANCOVA	Analysis and Proposal 7 Due 11/4
11/4/2024	Bayesian Inference	Last day to drop 11/11
11/11/2024	Bayesian Hypothesis testing	Analysis and Proposal 8 Due 11/18
11/18/2024	Working with Ordinal data	Analysis and Proposal 9 Due 11/25,
11/25/2024	Statistics "in the wild"	<i>No Class Wednesday</i>
12/2/2024	Using statistics responsibly	Analysis and Proposal 10 Due 12/11
		Final Exam Due 12/11

AI POLICY: USE OF GENERATIVE AI PERMITTED UNDER SOME CIRCUMSTANCES OR WITH EXPLICIT PERMISSION

There are situations and contexts within this course where you may be asked to use artificial intelligence (AI) tools to explore how they can be used. Outside of those circumstances, you should not use AI tools to generate content (text, video, audio, images) that will end up in any student work (assignments, activities, discussion responses, etc.) that is part of your evaluation in this course. Any student work submitted using AI tools should clearly indicate with attribution what work is the student's work and what part is generated by the AI. In such cases, no more than 25% of the student work should be generated by AI. If any part of this is confusing or uncertain, students should reach out to their instructor for clarification before submitting work for grading. Use of AI-generated content without the instructor's permission and/or proper attribution in this course qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

NOTE: Guidance for how to cite AI-generators, like ChatGPT, can be found here <https://apastyle.apa.org/blog/how-to-cite-chatgpt>

IMPORTANT POLICIES AND RESOURCES

Academic Accommodations for Persons with Disabilities: The Americans with Disabilities Act Amendments Act (ADAAA) of 2008 and the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights protection for persons with disabilities. Title II of the ADAAA and Section 504 of the Rehabilitation Act require that students with disabilities be guaranteed equal access to the learning environment through the provision of reasonable and appropriate accommodation of their disability. If you have a diagnosed disability that may require an accommodation, please contact Disability Support Services (DSS) for the coordination of services. The phone number for DSS is (210) 784-1335 and email is dsupport@tamusa.edu.

Academic Learning Center: The Academic Learning Center provides free course-based tutoring to all currently enrolled students at Texas A&M University-San Antonio. Students wishing to work with a tutor can make appointments through the Brainfuse online tutoring platform. Brainfuse can be accessed in the *Tools* section of Blackboard. You can contact the Academic Learning Center by emailing tutoring@tamusa.edu, calling (210) 784-1307, or visiting the Central Academic Building, room 202.

Counseling/Mental Health Resources: As a college student, there may be times when personal stressors interfere with your academic performance and/or negatively impact your daily functioning. If you are experiencing emotional difficulties or mental health concerns, support is available to you through the Student Counseling Center (SCC). To schedule an appointment call 210-784-1331 or visit Modular C, Room 166 (Rear entrance).

All mental health services provided by the SCC are free and confidential (as the law allows). The Student Counseling Center provides brief individual and group therapy, crisis intervention, consultation, case management, and prevention services.

Crisis support is available 24/7 by calling the SCC at 210-784-1331 (after-hours select option '2'). For more information and self-help resources, please visit www.tamusa.edu/studentcounseling

Emergency Preparedness: JagE Alert is Texas A&M University-San Antonio's mass notification. In the event of an emergency, such as inclement weather, students, staff and faculty, who are registered, will have the option to receive a text message, email with instructions and updates. To register or update your information visit: <https://tamusa.bbcportal.com/>.

More information about Emergency Preparedness and the Emergency Response Guide can be found here:

<https://www.tamusa.edu/uploadfile/folders/sdbowen23/pdf/pdf-635073426137928167-10.100.20.116.pdf>

Financial Aid and Verification of Attendance: According to the following federal regulation, 34 CFR 668.21: U.S. Department of Education (DoE) Title IV regulation, a student can only receive Title IV funds based on Title IV eligibility criteria which include class attendance. If Title IV funds are disbursed to ineligible students (including students who fail to begin attendance), the institution must return these funds to the U.S. DoE within 30 days of becoming aware that the student will not or has not begun attendance. Faculty will provide the Office of Financial Aid with an electronic notification if a student has not attended the first week of class. Any student receiving federal financial aid who does not attend the first week of class will have their aid terminated and returned to the DoE. Please note that any student who stops attending at any time during the semester may also need to return a portion of their federal aid.

Meeting Basic Needs: Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students (DOS@tamusa.edu) for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources they may possess.

Military Affairs: Veterans and active-duty military personnel are welcomed and encouraged to communicate, in advance if possible, and special circumstances (e.g., upcoming deployment, drill requirements, disability accommodations). You are also encouraged to visit the Patriots' Casa in-person room 202, or to contact the Office of Military Affairs with any questions at military@tamusa.edu or (210)784-1397.

Religious Observances: Texas A&M University-San Antonio recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes for regular session classes.

Respect for Diversity: We understand that our students represent diverse backgrounds and perspectives. When we are equity-minded, we are aware of differences and inequalities and are willing to discuss them so we can act to resolve them. The University is committed to building cultural competencies, or the attitudes, skills, and knowledge that

enable individuals and organizations to acknowledge cultural differences and incorporate these differences in working with people from diverse cultures. Respecting and accepting people different than you is vital to your success in the class, on campus, and as a future professional in the global community. While working together to build this community we ask all members to:

- Share their unique experiences, values, and beliefs.
- Be open to the views of others.
- Honor the uniqueness of their colleagues.
- Value each other's opinions and communicate respectfully.
- Keep confidential discussions that the community has of a personal (or professional) nature.
- Use this opportunity together to discuss ways in which we can create an inclusive environment in this course and across the A&M-San Antonio community.

The Six-Drop Rule: Students are subject to the requirements of Senate Bill (SB) 1231 passed by the Texas Legislature in 2007. SB 1231 limits students to a maximum of six (6) non-punitive course drops (i.e., courses a student chooses to drop) during their undergraduate careers. A non-punitive drop does not affect the student's GPA. However, course drops that exceed the maximum allowed by SB 1231 will be treated as "F" grades and will impact the student's GPA.

Statement of Harassment and Discrimination: Texas A&M University-San Antonio is committed to the fundamental principles of academic freedom, equality of opportunity and human dignity. To fulfill its multiple missions as an institution of higher learning, A&M-San Antonio encourages a climate that values and nurtures collegiality, diversity, pluralism and the uniqueness of the individual within our state, nation, and world. All decisions and actions involving students and employees should be based on applicable law and individual merit. Texas A&M University-San Antonio, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, gender identity, or gender expression. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the appropriate offices within their respective units.

Texas A&M University-San Antonio faculty are committed to providing a safe learning environment for all students and for the university as a whole. If you have experienced any form of sex- or gender-based discrimination or harassment, including sexual assault, sexual harassment, domestic or dating violence, or stalking, know that help and support are available. A&M-San Antonio's Title IX Coordinator can support those impacted by such conduct in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The university strongly

encourages all students to report any such incidents to the Title IX Coordinator. Please be aware that all A&M-San Antonio employees (other than those designated as confidential resources such as counselors and trained victims advocates) are required to report information about such discrimination and harassment to the university. This means that if you tell a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the university's Title IX Coordinator (titleix@tamusa.edu, 210-784-2061, CAB 439K). If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact the Student Counseling Center at (210) 784-1331, Modular C.

Students' Rights and Responsibilities: The following statement of students' rights and responsibilities is intended to reflect the philosophical base upon which University Student Rules are built. This philosophy acknowledges the existence of both rights and responsibilities, which is inherent to an individual not only as a student at Texas A&M University-San Antonio but also as a citizen of this country.

Students' Rights

1. A student shall have the right to participate in a free exchange of ideas, and there shall be no University rule or administrative rule that in any way abridges the rights of freedom of speech, expression, petition and peaceful assembly as set forth in the U.S. Constitution.
2. Each student shall have the right to participate in all areas and activities of the University, free from any form of discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status in accordance with applicable federal and state laws.
3. A student has the right to personal privacy except as otherwise provided by law, and this will be observed by students and University authorities alike.
4. Each student subject to disciplinary action arising from violations of university student rules shall be assured a fundamentally fair process.

Students' Responsibilities

1. A student has the responsibility to respect the rights and property of others, including other students, the faculty and administration.
2. A student has the responsibility to be fully acquainted with the published University Student Rules found in the Student Handbook, [Student Code of Conduct](#), on our website, University Catalog and to comply with them, as well as federal, state, and local laws.

3. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire University community.
4. A student has the responsibility to recognize the University's obligation to provide an environment for learning.
5. A student has the responsibility to check their university email for any updates or official university notification.

We expect that students will behave in a manner that is dignified, respectful, and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

Students are expected to exhibit a high level of honesty and integrity in their pursuit of higher education. Students engaging in an act that violates the standards of academic integrity will find themselves facing academic and/or disciplinary sanctions. Academic misconduct is any act, or attempt, which gives an unfair advantage to the student. Additionally, any behavior specifically prohibited by a faculty member in the course syllabus or class discussion may be considered as academic misconduct. For more information on academic misconduct policies and procedures please review the [Student Code of Conduct](#).

Writing, Language, and Digital Composing Center: The Writing, Language, and Digital Composing Center supports graduate and undergraduate students in all three colleges as

The complete academic calendar is available online:

<https://www.tamusa.edu/academics/academic-calendar/index.html>

well as faculty and staff. Tutors work with students to develop reading skills, prepare oral presentations, and plan, draft, and revise their written assignments. Our language tutors support students enrolled in Spanish courses and students composing in Spanish for any assignment. Our digital studio tutors support students working on digital projects such as eportfolios, class presentations, or other digital multimedia projects. Students can schedule appointments through JagWire under the Student Services tab. Click on "Writing, Language, and Digital Composing Center" to make your appointment. The Center offers face-to-face, synchronous online, and asynchronous digital appointments. More information about what services we offer, how to make an appointment, and how to access your appointment can be found on our website at <https://bit.ly/WLDCCenter>.

Important Dates:

August 28	First day of class
November 10	Last day to drop with an automatic "W"
November 21	Last day to drop a course or withdraw from the University
November 22	Study Day – No classes
November 23-25	Thanksgiving Holiday – University closed
December 7	Last day of classes
December 8	Study Day – No classes
December 9-15	Final exams