

PSYC 2354 Statistics and Laboratory

Section:	PSYC 2354.001	Instructor:	Dr. Brandon Bretl, PhD
Days:	TuTh	Email:	BBRETL@uttyler.edu
Times:	12:30 a.m. – 1:50 a.m.	Phone:	903-566-7390
Location:	HPR 262	Office:	BEP 246
		Office Hours:	MW 11:00 a.m. – 1:00 pm (and by appointment)

Contacting Me

- For any questions regarding the course or course content, contact your TA first.
- See Canvas for TA contact info.
- To contact me, email is best: BBRETL@uttyler.edu
- I do my best to respond within 24 hours on weekdays.
- We will not respond to emails over the weekend.
- Use your UTT email to contact me. I won't respond to unknown email addresses.

Official Course Description

An introduction to descriptive and inferential statistical methods used in psychological research. Emphasis will be on hypothesis testing with t-tests, analysis of variance, correlation, and selected nonparametric techniques.

Student Learning Outcomes

Student Learning Outcomes & Assessments Upon successful completion of the course, the student will be able to: 1. Demonstrate an understanding of the differences between and uses of descriptive and inferential statistics. (BS/BA 6.0) 2. Demonstrate an understanding of the differences between parametric and nonparametric statistics (BS/BA 6.0) a. Define and distinguish between a population and a sample. b. Define and distinguish between statistics and parameters. c. Classify data with respect to the four levels of measurement. 3. Compute statistical tests manually (with a calculator) and interpret and explain results. (BS/BA 6.0) a. Compute and explain measures of central tendency and find the mean, median and mode of a sample and a population b. Compute and explain variability: range, variance and standard deviation c. Calculate and interpret standard z scores and information gained through normal distribution tables. d. Calculate and interpret correlation coefficients using the Pearson and the Spearman. e. Explain regression and predict y-values using regression equation. f. Calculate and interpret standard error of the estimate and proportion of variance accounted for. g. Discuss hypothesis testing and how to state the null and alternative hypotheses h. Interpret the level of significance of a hypothesis test (p-values) i. Identify type I and type II errors, and the probabilities associated with them. j. Discuss the power of an analysis and the factors that affect it. k. Perform one and two sampled t-tests, determine significance, and interpret the results. l. Explain an F-test, calculate and interpret a one-way ANOVA m. Calculate and interpret a two-way ANOVA n. Calculate and interpret non-parametric tests such as the Mann-Whitney U, the Wilcoxon rank test, and Chi

Squares. 2 o. Graph different types of data manually and describe the information contained in them. 4. Be able to identify the independent and dependent variables of experiments, determine the design and the correct statistical analyses with which to test appropriate hypotheses. (BS/BA 6.0)

All materials for course provided through Canvas.

Grading

Scale

A: 90.0% of points or above

B: 80.0% - 89.9% of points

C: 70.0% - 79.9% of points

D: 60.0% - 69.9% of points

F: 59.9% of points or below

Tentative Percentages

15% - Online Quizzes

35% - Midterm Assessments (Exams)

5% - Final Data Project

20% - Participation & Projects (Worksheets/Handouts)

25% - Data Projects

More information on all assignments, including due dates and submission guidelines will be posted on Canvas.

Attendance

I take attendance on a regular basis. Students lose a point for each unexcused absence after their first unexcused absence.

Worksheets

Graded and non-graded worksheets will be used to learn concepts and assess understanding.

Data Projects

Data projects will be completed in groups on Jamovi and submitted in Canvas. More information will be provided in class.

Online Quizzes

We may use quizzes to assess student understanding and adjust the pace of the course.

The assignments and grade points are approximations and are subject to change. Canvas will always have the most up-to-date information on assignments and grades.

Midterms

Midterm Assessment #1

We will have an exam covering the following chapters:

- Introduction to Variables
- Measures of Central Tendency
- Measures of Variability
- z-scores & Central Limit Theorem

Midterm Assessment #2

(Tentative) Topics for Midterm Assessment #2

- Hypothesis Testing
- t-test & Confidence Interval
- Two samples hypothesis test

Final Data Project

Information will be provided in class and on Canvas.

Topics & Tentative Schedule

Week	Topic	Readings
1	Introductions	
2	Graphs	
3	Measures of Central Tendency	
4	Measures of Variability	
5	z-Scores	
6	Sampling Distributions	
7	Hypothesis Testing	
8	t-Distributions/Confidence Int.	
9	<i>BREAK</i>	
10	Two-samples Hypoth. Testing	
11	Two-samples Hypoth. Testing	
12	ANOVA	
13	Correlations	
14	Linear Regression	
15	Data Projects	
16	<i>FINAL EXAMS</i>	

Other Course Policies and Expectations

Civility

I expect everyone to come to class with a sincere intention to treat others fairly and respectfully. We are all here to learn. I will give you that chance, and I expect you give me and your classmates that chance as well. This includes treating everyone with respect and kindness. If at any time during the semester you feel uncomfortable, please let me know. I can either address the issue or refer the issue to the appropriate resources on campus. Expressions or actions that disparage a person's or group's race, ethnicity, gender, gender identity, religion, sexual orientation, marital status, parental status, age, or disability are contrary to the mission of the course, department, and university and will not be tolerated.

Academic Integrity

I take academic misconduct seriously and will, as a matter of fairness, always pursue suspected academic misconduct to the full extent of university policy. Examples of academic misconduct include plagiarism, cheating on tests, purchasing papers from others, submitting work that is not yours as your own, and selling or unauthorized distribution of course materials.

Artificial Intelligence Policy (AI Policy)

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, you can use AI programs (ChatGPT, Copilot, etc.). These programs can be powerful tools for learning and other productive pursuits, including completing assignments in less time, helping you generate new ideas, or serving as a personalized learning tool. However, your ethical responsibilities as a student remain the same. You must follow UT Tyler's Honor Code and uphold the highest standards of academic honesty. This applies to all uncited or improperly cited content, whether created by a human or in collaboration with an AI tool. If you use an AI tool to develop content for an assignment, you must cite the tool's contribution to your work.

Last Day to Withdraw from Course

The last day to withdraw from course is Nov. 3, 2025.

Core Purpose of College of Education and Psychology:

To prepare competent, caring, and qualified professionals in the fields of education, psychology and counseling, to foster discovery and to advance the knowledge base in our respective disciplines.

Vision

The CEP will be a global leader in responding to needs in the fields of education, psychology, and counseling, with a focus on the East Texas region, by creating innovative academic and scholarly pathways and partnerships.

Mission

The mission of the CEP is to prepare competent and passionate professionals in the fields of education, psychology, and counseling; to advance knowledge and expertise; and to impact these fields locally, regionally, nationally, and internationally.

UNIVERSITY POLICIES

UT Tyler Honor Code

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Students Rights and Responsibilities

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: <http://www.uttyler.edu/wellness/rightsresponsibilities.php>

Campus Carry

We respect the right and privacy of students 21 and over who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>

Tobacco-Free University

All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors. Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products. There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit <http://www.uttyler.edu/tobacco-free>

Grade Replacement/Forgiveness and Census Date Policies

Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (Stewart Hall 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date is the deadline for many forms and enrollment actions of which students need to be aware. These include:

- ☐ Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- ☐ Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- ☐ Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- ☐ Being reinstated or re-enrolled in classes after being dropped for non-payment
- ☐ Completing the process for tuition exemptions or waivers through Financial Aid

State-Mandated Course Drop Policy

Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Disability Services

Disability/Accessibility Services: In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University of Tyler at Texas offers accommodations to students with learning, physical and/or psychological disabilities. If you have a disability, including non-visible a diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or you have a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler> and fill out the New Student application. The **Student Accessibility and Resources** (SAR) office will contact you when your application has been submitted and an appointment with an Accessibility Case Manager. For more information, including filling out an application for services, please visit the SAR webpage at <http://www.uttyler.edu/disabilityservices>, the SAR office located in the University Center, # 3150 or call 903.566.7079.

Student Absence due to Religious Observance

Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities

If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement:

It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Student Standards of Academic Conduct: Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

(i) "Cheating" includes, but is not limited to:

- copying from another student's test paper;
- using, during a test, materials not authorized by the person giving the test;
- failure to comply with instructions given by the person administering the test;
- possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;
- using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;
- collaborating with or seeking aid from another student during a test or other assignment without authority;
- discussing the contents of an examination with another student who will take the examination;
- divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructors has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
- substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;

- paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;
- falsifying research data, laboratory reports, and/or other academic work offered for credit;
- taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
- misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.

(ii) “Plagiarism” includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another’s work and the submission of it as one’s own academic work offered for credit.

(iii) “Collusion” includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

(iv) All written work that is submitted will be subject to review by SafeAssign™, available on Blackboard.

UT Tyler Resources for Students:

- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu, <http://www.uttyler.edu/writingcenter/>
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu, <https://www.uttyler.edu/tutoring/>
- The Mathematics Learning Center, RBN 4021, This is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254) <https://www.uttyler.edu/counseling/>