

PSY 317L: Introduction to Statistics for the Behavioral Sciences

Course Format: Online, Self-Paced

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Course Credits: 3

Prerequisites: None.

How This Course Works

This course is online and is self-paced. Students have five months from their date of enrollment to complete the course. All coursework and proctored exams are submitted or taken online.

While this course is self-paced in terms of when you complete the work and submit assignments, periodic assessments are critical to ensuring that students receive adequate support and are able to achieve the intended learning outcomes. Thus, this course is organized into modules that must be completed in order. Students will only be able to move forward once they have received a grade on all assessments within a given module.

Review the course outline and assignment descriptions carefully. Computer-graded assignments are scored immediately. You can expect to receive feedback on instructor-graded assignments or exams within three business days following submission. This does not include weekends or holidays. Requests for expedited grading are not accommodated, so please plan accordingly. During certain times (end of semester, spring break, etc.), instructors may experience higher-than-usual demands on their time and may need additional time for evaluation. Students should reach out to University Extension at uex@austin.utexas.edu with any concerns regarding grading turnaround.

University Extension strongly advises students to be aware of when they may need a course grade to be recorded on their transcript. It can take up to two weeks after the final exam is complete for a grade to be officially recorded with the Office of the Registrar.

Course Overview

Understanding statistics and data is a fundamental skill for everybody. Being able to draw conclusions from data and gain understanding and insights into the world is not just the basis of all sciences including psychology, neuroscience, and medicine, but also social sciences and public policy research.

Further, we use data and statistics in our everyday lives—we continuously make inferences about what is likely or unlikely to occur, what is fact versus fiction, and how to behave based on our observations and experiences. In this course, we will learn how to think critically about how we acquire knowledge and gain insight and confidence about what is true in the world.

Specifically, we will cover fundamental topics such as frequency distributions, central tendency, variability, probability, hypothesis testing, t-tests (for independent and paired samples), effect sizes, statistical power, estimation using confidence intervals, correlation, regression, non-parametric statistics, linear regression, and the basics of randomization tests.

This course will also highly emphasize learning how to use the statistical programming language R to manage, analyze, visualize and communicate data.

Required Materials

All required materials for the course are available for free online:

- Curley JP & Milewski TM, 2020, PSY317L Guidebook
- Navarro D, 2019, Learning Statistics with R: A Tutorial for Psychology Students and Other Beginners
- Wilke C, 2019, Fundamentals of Data Visualization
- Grolemund G & Wickham H, 2017, R for Data Science

Course Organization

The course material is organized into 12 modules. Each module contains reading assignments, lecture videos, and lecture slides, along with practice quizzes, computer-graded module quizzes, and instructor-graded assignments. Students are required to take one proctored exam.

Computer-Graded Assignments

Each module quiz will include approximately 10 quiz questions. Quizzes are not timed and are open-book.

Instructor-Graded Assignments

Each module assignment contains 1-4 questions for which you will need to upload a screenshot of your work. Your instructor will review your work and assign your grade accordingly, as well as provide feedback on your response and work.

Exam

This course requires that you take a proctored final exam consisting of 40 multiple choice questions. This exam is cumulative and will cover the entirety of the course content.

Course Outline

Module	Topics	Assessments
1	Course Introduction and Downloading R	Instructor-Graded Assignment 1 Computer-Graded Assignment 2
2	Data Carpentry	Computer-Graded Assignment 3 Instructor-Graded Assignment 4
3	Data Visualization	Computer-Graded Assignment 5 Instructor-Graded Assignment 6
4	Descriptive Statistics 1	Computer-Graded Assignment 7 Instructor-Graded Assignment 8
5	Descriptive Statistics 2	Computer-Graded Assignment 9 Instructor-Graded Assignment 10
6	Distributions and z-scores	Computer-Graded Assignment 11 Instructor-Graded Assignment 12
7	Sampling Distribution	Computer-Graded Assignment 13
8	One-Sample Tests and Confidence Intervals	Computer-Graded Assignment 14 Instructor-Graded Assignment 15
9	Two-Sample Tests 1	Computer-Graded Assignment 16 Instructor-Graded Assignment 17
10	Two-Sample Tests 2	Computer-Graded Assignment 18 Instructor-Graded Assignment 19
11	Correlation	Computer-Graded Assignment 20 Instructor-Graded Assignment 21
12	Regression	Computer-Graded Assignment 22 Instructor-Graded Assignment 23
FINAL EXAM		

Grade Calculation

Your final grade for the course will be calculated as follows:

12 Computer-Graded Module Quizzes	120 points
11 Instructor-Graded Module Assignments	40 points
Final Exam	40 points

You must pass the final exam to pass the course. You must also earn an overall passing grade:

A	100-94%	B+	89-87%	C+	79-77%	D+	69-67%	F	59-0%
A-	93-90%	B	86-84%	C	76-74%	D	66-64%		
		B-	83-80%	C-	73-70%	D-	63-60%		

Getting Help

- Technical Support: uextechsupport@austin.utexas.edu
- For content questions or questions about assignment and grades, use the Inbox tool within Canvas to contact the course instructor.
- For other questions (registration, transcripts, etc.), contact University Extension.

University Extension Policies

Full University Extension policies for self-paced courses may be found on the University Extension website.

Scholastic Dishonesty

Students in this course are expected to work independently, without direct supervision, and to conduct themselves responsibly in accordance with that freedom. To obtain the greatest benefit from their course work, and for the sake of everyone enrolled in our courses, students must demonstrate the willingness to exercise self-discipline, personal responsibility, and scholastic integrity.

We expect the course work and exams that you submit for course credit to be yours and yours alone. Plagiarism and other forms of scholastic dishonesty are serious academic violations that will not be tolerated. The penalties for scholastic dishonesty include the possibility of failure in the course. Scholastic dishonesty in examinations will automatically result in a grade of *F* on the exam and an *F* in the course.

University Extension Contact Information

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