

Common Course Syllabus for PSYC 2317, Fall 2019

Course Number: PSYC 2317	Department: Behavioral Sciences	Title: Statistical Methods in Psychology
Discipline: Psychology	Campuses: Levelland, Reese	Satisfies Core Curriculum Requirement? Yes
Prerequisites: none	Credit: 3 Lecture: 3 Lab: 1	Available Formats: Face-to-face

Course Specific Instructions: For face-to-face classes, each instructor will attach his/her course specific instructions.

Textbook: Privitera, G. (2018). Essential Statistics for the Behavioral Sciences (2nd ed.). Thousand Oaks, CA: SAGE Publications.

Course Description: This course covers descriptive and inferential statistics used in psychological research and assessment. It includes measurement, characteristics of distributions; measures of central tendency and variability; transformed scores; correlation and regression; probability theory; and hypotheses testing and inference. (PSYC 2317 is included in the Psychology Field of Study).

Course Purpose: To acquaint students with various statistical research methods used in psychology. In addition, explain how statistics are used to analyze data collected in psychological research, and how statistics contribute to hypothesis testing in psychological research.

Course Requirements: To maximize the potential to complete this course, students should attend all class meetings and/or login to internet courses at least twice weekly. In addition, satisfactorily complete all homework assignments and examinations on time, and satisfactorily complete all other projects or papers as assigned in the course instructions.

Course Evaluation: See instructor's course information sheet for specific items used in evaluating student performance.

Student Learning Outcomes/Competencies: Upon successful completion of this course, students will:

1. Compute and interpret empirical and theoretical probabilities.
2. Define and explain the characteristics of data based on their reliability, validity, and scales of measurement.
3. Interpret visual representations of data, such as graphs and tables.
4. Compute and interpret descriptive statistics, such as mean, median, and mode; standard deviation and range; and transformed scores.
5. Compute and interpret inferential statistics and tests, such as z test, t test, ANOVA, and Chi-Square.
6. Calculate, evaluate, and interpret simple linear correlation/regression.
7. Construct and interpret confidence intervals.
8. Examine, analyze, and compare various sampling distributions.
9. Formulate, perform, and interpret hypotheses tests.
10. Identify the appropriate statistical analyses for given research problems, questions, hypotheses, and data sets.
11. Apply statistical knowledge to the interpretation of psychological research.
12. Explain features and purpose of statistical software packages. CIP # 42.0101.52 25

Core Objectives addressed:

- **Communication skills**- effective written, oral and visual communication.
- **Critical thinking skills**- creative thinking, innovation, inquiry & analysis, evaluation & synthesis of information.
- **Empirical and Quantitative skills**-the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
- **Social Responsibility**- demonstrating intercultural knowledge and competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national and global communities.

Attendance Policy: Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus. When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students are officially enrolled in all courses for which they pay tuition and fees at the time of registration. Should a student, for any reason, delay in reporting to a class after official enrollment, absences will be attributed to the student from the first class meeting. Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as

stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X" or "F" as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student's responsibility to be aware of that policy.

It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.

Student Conduct: A high standard of conduct is expected of all students. Students are subject to federal, state and local laws, as well as South Plains College rules and regulations. Any student who fails to perform according to expected standards may be asked to withdraw. Failure to comply with lawful direction of a classroom teacher relative to maintaining good order is considered misconduct on the part of the student. Repeated violations of disrupting a class may result in the student being dropped from that course (See Catalog/Student Guide for full policy).

Diversity & Equal Rights: South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. All students are entitled to equal rights under the affirmative action and equal opportunity laws. Students are also protected against unjust or biased academic evaluation, but at the same time, they are responsible for maintaining standards of academic performance established for each course in which they are enrolled (See Catalog/Student Guide for full definitions and policies). The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President of Student Affairs.

ADA Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland Student Health & Wellness Center 806-716-2529; Reese Center (Building 8) and Lubbock Center, 806-716-4675; or Plainview Center Main Office, 806-716-4302 or 806-296-9611.

Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact Chris Straface, Director of Health and Wellness at 806-716-2362 or email cstraface@southplainscollege.edu for assistance.

Academic Integrity: The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders that offender liable to serious consequences, possibly suspension. This policy applies to all forms of cheating and plagiarism. See Instructor's Course Information for additions to the academic integrity policy.

Campus Carry Policy: The 84th Texas legislature passed Senate Bill 11, commonly known as the "campus carry" bill went into effect on August 1, 2017. Individuals holding a licensed to carry (LTC) or concealed handgun license (CHL) holders will have the legal right to carry a concealed handgun onto community college campuses; however, they **cannot** openly carry the handgun. South Plains College's detailed policy required by Senate Bill 11 can be found at this link: [Policy HHC - Concealed Carry of Handgun \(Campus Carry\)](#). **What Concealed Carry Allows:** (1) The law permits only licensed to carry (LTC) holders or concealed handgun license (CHL) holders to carry concealed handguns on campuses. (2) Allows an institution to adopt rules or regulations that prohibit license holders from carrying concealed handguns on certain areas of campus, in a building or portion of a building as long as the rules and regulations do not have the effect of generally prohibiting a license holder from carrying a concealed handgun on campus. Effective notice must be provided with respect to any place where handguns may not be carried. **What Concealed Carry Does Not Allow:** (1) The law does *not* allow "open carry" on college campuses. Open carry means the intentional display of a handgun, including the carry of a partially or wholly visible handgun stored in a shoulder or belt holster. (2) The law does *not* allow the carry of rifles or shotguns on college campuses.

Welcome to Statistical Methods in Psychology (PSYC 2317) with Dr. Barr

Fall 2019, T/Th 9-10:45 am, Reese Campus, Building 8, room 828

Some of you may be beginning this course with some trepidation or unease, but rest assured, Statistical Methods in Psychology is NOT your typical math course. Statistical methods are logical and understandable tools used for analyzing psychological topics of interest. Within the familiar context of psychology, I believe that you will be pleasantly surprised to find that the topics we discuss are far more comprehensible than you initially imagined.

The general format of the class will be as follows: I will explain a topic (e.g., the concepts from chapter 1), you will have a chance to work through example problems in class, and at least once a week we will end class with a short lab assignment examining how to conduct statistical procedures using the computer program SPSS. Once we finish discussing each main topic, you will complete a problem set (homework!) covering that material. Please be aware that the class will move somewhat quickly, so I strongly encourage you to *ask questions if you feel confused about anything*. Be brave and ask me to clarify the concepts that are confusing you, because if something is unclear to you, chances are it is unclear to some of your classmates as well.

CONTACT ME—I'm here to help!

Office: Reese campus, Building 4, room 405H **Email:** abarr@southplainscollege.edu **Phone:** (806)716-4641

Office Hours: Mon & Wed 10:45-11:30 am at the Lubbock Center; Mon & Wed 2:15-4:00 pm at Reese; Tue & Thur 2:15-3:45 pm at Reese; and Fri by appointment. *Please drop by my office hours, email me or call me if you need help with problem sets or lecture material.*

SPC Student email: Please check your SPC student email regularly for messages from your professors, and please send your email messages to me from this account. South Plains College provides all students admitted to SPC with an SPC Google email account which you can access by signing into MySPC. To log in to MySPC, click on the MySPC link located in the upper right corner of any page on our website. Then use the username and password provided in your acceptance letter. Once you are logged in to MySPC you will find the link to your email in the lower right-hand corner. If you encounter any problems, contact the help desk immediately at helpdesk@southplainscollege.edu or (806)716-2600.

COURSE INFORMATION AND REQUIREMENTS:

Classroom Conduct: Students are expected to behave in a manner that contributes to a positive learning environment for all of us. I want everyone to have the opportunity to learn as much as possible in my class, therefore students are required to *turn off or silence electronic devices* (that means your phone) *and stow them away, out of sight* (that does not include your lap—phones should be stowed inside a backpack, a bag/purse or your vehicle). Additionally, I recognize that our class meets in a computer classroom, however students are asked to only use computers during our designated lab time. Inappropriate behavior that is a distraction to others (i.e., using cell phones, derogatory language, etc.) will result in, minimally, a request to leave class.

Textbook: Privitera, G. (2018). Essential Statistics for the Behavioral Sciences (2nd ed.). Thousand Oaks, CA: SAGE Publications. **IMPORTANT!** The textbook is bundled with a USB drive that is packaged in a blue cardboard envelope, and contains a computer program called SPSS. Please do not lose or discard the USB. The USB allows you to install the statistics program two times only. One of these installations will be on the lab computers in our classroom. The other installation should be on your own reliable, personal computer. The textbook also has a companion website that may be helpful: <http://edge.sagepub.com/priviteraess2e>, however use of the website is optional. Regarding the textbook, students should read the chapter listed in the course schedule (p. 6-7 of the syllabus) before we cover that chapter in class. This will familiarize you with the concepts we will cover in class and prepare you with any questions you might have.

Calculator: You should have a *basic scientific calculator* with a square root key (\sqrt{X}), and a 2nd power key (X^2) to use on your homework, on in-class exercises, and on exams. A calculator will help you work more accurately and quickly when completing problem sets and exams. Your calculator should **NOT** have graphing capability or internet connectivity. Furthermore, you will **NOT** be allowed to use the calculator located on your cell phone, laptop or tablet.

Blackboard: The vast majority of course content and class materials (e.g., handouts, problem sets, etc.) will be given to you during class time. However, you may need to access materials on Blackboard as well, especially if you have missed

class or misplaced a paper from class. To access Blackboard, go to <https://southplainscollege.blackboard.com/>, or log in to MySPC, and click on “Blackboard Learn” in the section titled “Get Me There Quick.” To access Blackboard you will also need a reliable, internet-ready computer. If you do not have a personal computer or printer to access and/or print class materials, you may use any **SPC computer labs**. On the Reese campus, there is a computer lab in building 8 (room 827 and the library), building 2 (room 207), and building 4 (adjacent to room 451). At the Lubbock Center (39th and Avenue Q) the computer lab is in room 109, and at the Levelland campus the main computer lab is in the Technology building. If you have technical problems using Blackboard, contact technical support at 806-716-2180, Mon-Fri, 8 am – 4 pm; or email blackboard@southplainscollege.edu or go to <https://help.blackboard.com>.

Note Taking: Students need to take thorough, well-organized notes by hand. Accordingly, I will provide you with an incomplete version of my power points, to which *you should add plentiful notes of your own*. Research studies have found that students learn and remember more when taking notes by hand compared to taking notes on a computer, laptop or tablet (which I do not allow). If you feel like you need help taking better notes, you are welcome to bring a tape recorder to class, and/or visit with the academic counselors (building 8) who can provide guidance on numerous note taking strategies.

Attendance: I will take roll every day so that I have an accurate record of who is consistently attending class. Please be aware that it is very difficult for students to follow discussions when they have missed the previous class. So, do everything you can to be here every day. And, if you must miss class, make sure to get notes from a classmate and read through the borrowed notes, as well as the relevant pages of the textbook, before your return to class. If you have an emergency that interferes with your ability to attend class, notify me ASAP. We can then determine how you can keep up with course material, or if you need to withdraw.

Arrive on time! I typically take roll, make announcements, pass out handouts and return graded work at the beginning of class each day. Students who arrive late invariably miss important information, so make it a habit to be here on time! If you arrive late, you need to stay after class to make sure that you have been counted as present. In other words, *it becomes your responsibility to make sure you're on my roll sheet if you arrive late*.

COURSE GRADES: Your final grade in this course will be based on the following:

Problem sets: There will be 12 problems sets (homework assignments). Each problem set will be graded on a four-point scale: 4=excellent, 3=good, 2=fair, 1=poor. There are two problems sets that are longer than the rest, and these will be graded on a 6-point scale. Together, the problems sets are worth half an exam grade, so please put forth your best effort. The problem sets are directly tied to our class lectures, discussions and exercises and follow examples that are found in the handouts. Please complete the problems sets using your neatest handwriting, and make sure the questions are completed in the correct order and clearly numbered.

Problem sets must be turned in on the date specified for you to receive full credit. This policy will help you keep up with the class and prepare for exams. If you are not able to turn in a problem set on the due date you may turn it in late *if, and only if*, the answers to the problems set have not been handed out to the class. Late problems sets will receive the next lower score on the grading scale.

Lab Assignments: Approximately once a week, students will complete a relatively short lab assignment. These lab assignments are designed to familiarize you with the use of SPSS, a computer program used to analyze data. Lab assignments will be completed *in the classroom*, during the last 20-30 minutes of class. I estimate that there will be 10-12 lab assignments, each worth 3 points. More details will be provided about the lab assignments during our first lab session which is tentatively scheduled for Tuesday September 3rd.

Exams: There will be four exams, each worth 100 points. Each exam will cover the problems sets that have been turned in up to that time, and the relevant reading assignments. You must complete all four exams, because none of them will be dropped. The only excuse for missing an exam is illness, accident, or family emergency, verified by a physician's note, accident record or some other official document. If you must miss an exam because of one of the above reasons, you have one week from the original exam date to schedule and complete the make-up exam (please review my office hours for available make-up times).

Final Grade: Your final grade in the course will be based on the percentage of total possible points that you have earned on problem sets, lab assignments and exams.

CALCULATION OF FINAL GRADE			
Method	Due dates/Exam dates	Possible points	Your point earned
Problem sets	Weekly, see course schedule for specific dates, pp. 6-7	Ten at 4 pts each, and two at 6 points each = 52 pts	
Lab Assignments	Weekly	_____ lab assignments at 3 points each = _____ pts	
Exam 1	Tuesday, September 17 th	100 pts	
Exam 2	Thursday, October 10 th	100 pts	
Exam 3	Tuesday, November 5 th	100 pts	
Final Exam	Thursday, December 12 th at 8:00 am	100 pts	
		<i>Add this column to find the total possible points for the course: _____</i>	<i>Add this column to find the total points that you earned in the course: _____</i>

Divide your total points earned (last column) by the total possible points (3rd column) and multiply by 100 to calculate your final grade on a 100-point scale.

IMPORTANT ACADEMIC DATES AND HOLIDAYS:

- Monday, September 2—Labor Day Holiday, no classes
- Wednesday, September 11—12th Class Day (non-attending students will be dropped)
- Friday, October 11—SPC Fall Break, all campus buildings and offices closed
- Thursday, November 14—Last day to drop
- November 27th through 29th—Thanksgiving Holiday
- December 9th through 12th—Final Exam Week (no regularly held classes, final exams only)

Please write your name here: _____ (so that you know this syllabus belongs to you).

Now, swap contact information with 3- 4 classmates (phone &/or email) in case you need to contact someone for help studying, questions about class, etc. Also, I encourage you all to form study groups to prepare for exams if your schedule allows.

Name	phone	email
1. _____		
2. _____		
3. _____		
4. _____		

COURSE SCHEDULE*

Day, Date	Topic	Textbook Chapter	Problem Set Due
Th. 8/29	Introduction to Statistics	1	---
Tu. 9/3	Freq. Distributions, Tables & Graphs	2	<i>Privitera Appendix A review, and <u>self-test</u> pp.509-512</i>
Th. 9/5	Measures of Central Tendency	3	PS 1—introductory terms and concepts
Tu. 9/10	Measures of Variability	3 & 4	PS 2—freq. distributions & graphs
Th. 9/12	Measures of Variability, Measure of Relationship	4	PS 3—central tendency**
Tu. 9/17	EXAM 1: COVERS PS1-PS3	---	---
Th. 9/19	Measures of Relationship	13 (pp. 406-432)	PS 4—variability
Tu. 9/24	Introduction to Probability, Normal Distribution, z scores	5	PS 5—correlation
Th. 9/26	Probability, Normal Distribution, z scores	5	---
Tu. 10/1	Sampling Distribution of Means	6	PS 6—normal distribution
Th. 10/3	Sampling Distribution of Means, Estimation	6	---
Tu. 10/8	Sampling Distribution of Means, Estimation, Review	6	---
Th. 10/10	EXAM 2: COVERS PS4-PS6	---	---
Tu. 10/15	Interval Estimation, Hypothesis Testing	6 & 7	PS 7—sampling distribution, Parts I and II
Th. 10/17	Hypothesis Testing	7	PS 7—interval estimates, Part III
Tu. 10/22	Hypothesis Testing, One-sample z - tests	7	---
Th. 10/24	One-sample t -tests	8	PS 8 –hypothesis testing & one-sample z - tests
Tu. 10/29	One-sample t -tests, Two-sample, <u>non</u> - repeated measures t -tests	8 & 9	
Th. 10/31	Two-sample, <u>non</u> -repeated measures t -tests	9	PS 9—one-sample t -tests**
Tu. 11/5	EXAM 3: COVERS PS7-PS9	---	---

Th. 11/7	Two sample repeated measures t-tests	10	---
Tu. 11/12	One-factor Analysis of Variance	11	PS 10—two sample non-repeated t -tests
Th. 11/14	One- and Two-factor ANOVA	11 & 12	PS 11—repeated measures t -tests
Tu. 11/19	Two-factor ANOVA and interactions	12	---
Th. 11/21	Linear Regression	13 (pp.433-449)	PS 12—one-factor ANOVA
Tu. 11/26	Linear Regression	13 (pp.433-449)	---
Tu. 12/3	Chi-Square Tests	14	---
Th. 12/5	Review for Final Exam	---	---
Th. 12/12	FINAL EXAM: COVERS PS 10-12, AND CH. 13 & 14	---	---

NOTES:

*Please note: The schedule above is tentative and may be changed based on the needs of the class, and the speed with which we are able to cover the planned topics.

PS 3 and PS 9 are due on class days preceding an exam. They **MUST be turned in at the beginning of class on the scheduled day for you to receive credit for it. I will review the problem set on the day before the exam, and have the problem set graded by the end of the day and ready for pick-up by 4:00 so that you can review your graded work prior to the exam. If any of the other problem sets are rescheduled to be due on a class day before the exam, then the same policy will apply to the rescheduled problem set.