

Course Syllabus Psy 320 Social Science Research Methods II Spring 2026

Instructor

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Meeting Times and Location

Class: Tu-Th 1:30–3:10 PM, Cramer Hall 383

Text

Welkowitz, J., Cohen, B.H., & Lea, R.B. *Introductory statistics for the behavioral sciences, seventh edition*. Wiley. Available free to read online from the [PSU library](#) (you must be logged in to view).

Overview

This course is an introduction to and application of statistical modeling for psychological data. Guidance and practice in the computation, interpretation, reporting of common statistical tests and software use are key components of the course. Topics include descriptive statistics, comparisons of means among groups, relations among variables, predictive statistical models, and the analysis of categorical data. This is not a math course, but some relatively simple mathematics are needed. I emphasize statistical concepts, applications, and interpretation of results. Prerequisite: Stat 243Z or SOC 396.

Canvas

The Canvas page, <https://canvas.pdx.edu/courses/114762>, includes a link to the syllabus, weekly reading questions, quizzes, and additional required readings (details for each of these elements are given below). I will post any lecture materials for class before the start of each class period on the class Canvas page. Please note that **the PowerPoints do not include all of the information you are expected to learn, so you should take notes on additional information and explanations that are given during lectures**. I recommend taking notes on all other material presented in class, whether presented on a slide, the board, or just mentioned verbally.

Grades

Grades are based on two quizzes (80 points, 41%), five homework assignments (75 points, 38%), and weekly multiple choice reading questions (40 points, 21%). Letter grades are assigned according to the following percentage categories out of the 540 total points: $\geq 90 = A$, 85-89.9 = B+, 80-84.9 = B, 75-79.9 = C+, 70-74.9 = C, 65-69.9 = D+, 60-64.9 = D, < 60 = F. Incompletes will only be given in extenuating circumstances (please contact me as soon as possible if you think you will need one). Other university rules for grading standards are here: <https://pdx.smartcatalogiq.com/2025-2026/bulletin/undergraduate-studies/grading-system-for-undergraduates/>

Quizzes (80 points total; 41% of final grade)

There will be two quizzes (see the “Schedule and Important Dates” section below), worth 40 points each, covering the material in readings and lectures in the section preceding the quiz date (the final is not cumulative). Each quiz will consist of 10 multiple choice questions (2 points each) and 4 short answers (5 points each). Short answers will consist of hand computations or statistical output interpretation. Short answers will be assigned 0-5 points according to the following scale: 5 = excellent, 4 = all correct/adequate, 3 = something incorrect, 2 = below average, 1 = something correct, 0 = no answer/nothing correct. Each quiz covers the readings and lecture through the last class (i.e, Tuesday of that week) before the quiz beginning date. I do not give out any written study guides or hold review sessions. Quizzes will be available on the Canvas course page Thursday prior to the due date and then due on the following Monday (midterm) or Tuesday (final) at midnight. The

quiz must be completed in 90 minutes in one continuous attempt. **Make-up quizzes or quiz extensions will only be given when you have a serious health issue** (e.g., serious case of COVID-19 or flu, hospitalization, pneumonia, which may require an appointment verification at the student health center or a doctor) **or there is a family emergency** (e.g., death in the family). Please see **Terms and Conditions for Late Papers** on the Canvas page for details).

Homework Assignments (75 points; 38% of final grade)

There are five homework assignments that will each consist of three questions (5 points per question; 15 points per assignment), which may include hand computations, SPSS statistical analysis, or open-ended responses covering material from the two prior weeks. Homework assignments will be available on Canvas on Tuesday after class of the first week of the assignment period and will be due on Sunday at midnight of the due date. **Please upload as pdf file to Canvas.** See the “Schedule and Important Dates” section below. Late assignments are penalized 3 points per day late (20%).

Reading Questions (40 points; 21% of final grade)

Each week, you should complete four multiple-choice questions about the readings (1 point per question, 4 points per week) on Canvas. **You are allowed to miss one week's questions, but if you complete the questions for all ten weeks you will receive 4 extra credit points.** Each question is about the material covered in the readings for that week and will likely be related to questions appearing on the quiz. The questions will be available for completion between Thursday after class through Sunday of the due date, and must be completed by Sunday at midnight. They are open-book questions. If you have already read the material, these questions should take you only about 15 minutes or less. See the “Schedule and Important Dates” section below.

Software

This class will use the IBM Statistical Package for the Social Sciences (SPSS) for the homework assignments. You can access SPSS at [on-campus computer labs](#) (find IBM SPSS Statistics in the apps menu), through the [PSU Virtual Lab \(instructions for using PSU VLab\)](#), or by renting or buying a Grad Pack¹ license from a variety of sources (e.g., [six month rental for \\$35](#)). I will illustrate and explain SPSS implementation and interpretation in class.

Tips for Doing Well in this Course

Here are a few simple suggestions for doing well in this class.

- Do not miss quizzes
- Do not miss homework assignments (*material in the homework assignments are directly relevant to questions on the quizzes*).
- Do not miss classes (*no attendance will be taken, but I estimate that missing a class will result in a few percentage points off your final grade as a consequence of missing key information*)
- Take notes on lectures (*the lecture PowerPoints only have some of the information you need*)
- Do the reading each week (*take your time, decipher notation, take notes, ask questions*)
- Study for the quizzes (*review the book, lectures, homework assignments: definitions, practice, notation, output, concepts*)
- I recommend working with others for studying for quizzes and discussing the homework assignments (*however, quizzes must be completed on your own and homework assignments must be in your own words*).
- **Don't be afraid to ask the instructor when you have questions or need help** (during class, after class-before class-during break, via email, office hours in-person or via Zoom)

¹ The Grad Pack does not include a few of the analyses you will need to conduct for a couple of the homework assignments.

Attendance

I do not take attendance or explicitly include attendance or participation in your grade, but a substantial portion of each quiz will concern lecture material. Missing even a single class will inevitably impact your grade substantially. Missing weekly reading questions, homework assignments, or exams will have serious impacts on your grade.

Academic Conduct

*Students are expected to abide by the Portland State University code of conduct in terms academic integrity and behavior (<https://www.pdx.edu/dean-student-life/academic-misconduct>). Infractions of academic integrity include cheating on quizzes, copying someone else's work, stealing, buying or selling course Homework assignments or quizzes, and plagiarism (using another writer's words without quoting and attribution). **Note that use of AI on Homework assignments may result in some of these violations because AI regularly borrows existing work.***

Students are encouraged to contribute to the discussion, think aloud, and voice their opinion, but I also expect interactions to be respectful, including listening to others, avoiding interruptions, not monopolizing the discussion, and justly treating fellow classmates regardless of race, ethnicity, nationality, gender, sexual orientation, disability, age, or socio-economic status.

Diversity, Equity, and Inclusion

Portland State University's Department of Psychology is fully committed to diversity, equity, and inclusion. Our department fosters a vibrant intellectual environment in which human diversity is recognized and valued in all its forms. We support learning, research, and outreach activities that promote the values of diversity, equity, and inclusion. My goal is to create a learning environment that is accessible, equitable, inclusive, and welcoming. I am committed to fostering mutual respect and full participation for all students. If there are any incidents or conditions that you feel do not conform to these goals, please discuss them with me or you can consult with the Dean of Student Life office, <https://www.pdx.edu/dean-student-life/psu-cares>.

Disabilities

I am happy to make any necessary arrangements with students who have a disability and are in need of academic accommodations. If you have not done so already, please contact the Disability Resource Center, 116 Smith Memorial Student Union, <https://www.pdx.edu/disability-resource-center/>, Email: drc@pdx.edu, for assistance and any testing arrangements. I would appreciate it if you would check with me as soon as possible to discuss any needed accommodations and to make sure that I have received a faculty notification letter. If any aspects of instruction or course design result in barriers to your inclusion or learning, please let me know.

Schedule and Important Dates

Please make sure you read the assigned material and be prepared to discuss it before class. Unless otherwise indicated, all chapter references are to the required textbook, Welkowitz, J., Cohen, B. H., & Lea, R. B. (2012). *Introductory statistics for the behavioral sciences, seventh edition* described above. Page number references refer to the paper textbook or the pdf view on Ebook Central and do not include to any partial sections. **All reading questions, Homework assignments, and quizzes must be submitted by midnight of the due date.**

Week 1 Topic: Class Overview, SPSS Software, Descriptive Statistics

3/31 First class meeting: discuss syllabus, how to do well in the class, SPSS

4/2 Chapter 2: Frequency Distributions and Graphs (pp. 27-35 only);

Chapter 3: Measures of Central Tendency and Variability

Due 4/5: Week 1 Reading Questions

Week 2 Topic: Review of Standard Scores, Hypothesis Testing, and Confidence Intervals

4/7 Chapter 4: Standardized Scores and The Normal Distribution

Chapter 2: Frequency Distributions and Graphs (pp. 38-45)

4/9 Chapter 5: Introduction to Statistical Inference

Chapter 6: The One-Sample t Test and Interval Estimation (pp. 143-152)

Due 4/12: Week 2 Reading Questions

Due 4/12: Homework Assignment 1

Week 3 Topic: Comparing Means

4/14 Chapter 7 Testing Hypotheses About the Difference Between the Means of Two Populations

4/16 Chapter 7 Testing Hypotheses About the Difference Between the Means of Two Populations

Due 4/19: Week 3 Reading Questions

Week 4 Topic: Review of Discrete Events, z Proportion Test, and Chi-square

4/21 Chapter 6: The One-Sample t Test and Interval Estimation (pp. 152-156)

Chapter 16: Probability of Discrete Events and the Binomial Distribution (pp. 442-448)

4/23 Chapter 17: Chi-Square Tests

Due 4/26: Week 4 Reading Questions

Due 4/26: Homework Assignment 2

Week 5 Topic: Correlation and Regression

4/28 Chapter 9: Linear Correlation (pp. 218-238)

4/30 Chapter 10: Prediction and Linear Regression (pp. 253-262)

Due 5/3: Week 5 Reading Questions

Due 5/4: Midterm Quiz over Weeks 1 through 5

Week 6 Topic: Psychological Measures and Reliability

5/5 Chapter 6 from Furr & Bacharach (pp. 125-151; *available through class Canvas page*)

5/7 Chapter 6 from Furr & Bacharach (pp. 125-151; *available through class Canvas page*)

Due 5/10: Week 6 Reading Questions

Due 5/10: Homework Assignment 3

Week 7 Comparing Multiple Group Means with ANOVA, Follow-Up Tests

5/12 Chapter 12: One-Way Analysis of Variance (pp. 315-333)

5/14 Chapter 13: Multiple Comparisons (pp. 349-351, 355-365)

Due 5/17: Week 7 Reading Questions

Week 8 Interactions and Factorial ANOVA

5/19 Chapter 14: Introduction to Factorial Design: Two-Way Analysis of Variance (pp. 373-381)

5/21 Chapter 14: Introduction to Factorial Design: Two-Way Analysis of Variance (pp. 387-391)

Due 5/24: Week 8 Reading Questions

Due 5/24: Homework Assignment 4

Week 9 Repeated-Measures ANOVA

5/26 Chapter 15: Repeated Measures ANOVA (pp. 402-415)

5/28 Chapter 15: Repeated Measures ANOVA (pp. 415-423)

Due 5/31: Week 9 Reading Questions

Week 10 Nonparametric Statistics, Power Analysis, Review

6/2 Chapter 8: Nonparametric Tests for the Difference Between Two Means

Chapter 12: One-Way Analysis of Variance (pp. 336-339)

6/4 Chapter 11: Introduction to Power Analysis (pp. 281-285, 299-303)
Due 6/7: Week 10 Reading Questions
Due 6/7: Homework Assignment 5

Finals Week
Due 6/9 Final Quiz over Weeks 6 through 10