

PSYC 300: STATISTICS FOR PSYCHOLOGISTS

University of Wisconsin-Stevens Point
Syllabus for Summer 2022

PROFESSOR INFORMATION

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Hours: On Zoom by appointment
(sign-up in Canvas Scheduler)

COURSE INFORMATION

Sections / Credits: 01 and 01L / 4
Time / Location: Asynchronous online
(optional synchronous
labs weekly via Zoom)
Prerequisites: PSYC 110 and MATH
95 (or equivalent)
GEP AD / BS: NW, QL-AD / QL

REQUIRED TEXTBOOK

Nolan, S. A., & Heinzen, T. E. (2021). *Essentials of statistics for the behavioral sciences* (5th ed.). Macmillan. Available for pick-up or shipping from UWSP Text Rental.

COURSE DESCRIPTION

This course provides an overview of univariate statistics in psychology—statistical analyses that include a single, dependent variable, as well as one or more independent variables. The course begins by examining the relationship between research methods and statistical analyses. It next considers graphical and numerical descriptions of people's scores on dependent variables. The course then transitions to discussing key statistical principles, such as probability and normality. It next outlines the difference between hypothesis testing and effect sizes as two approaches to making statistical inferences. The course then focuses on three families of inferential tests—*t*-tests, ANOVAs, and correlations/regressions. It ends with the application of course principles and skills in the final statistical project.

LEARNING OUTCOMES

General Education

After taking this course, you will be able to...

- Select, analyze, and interpret appropriate numerical data used in everyday life in numerical and graphical format.
- Identify and apply appropriate strategies of quantitative problem solving in theoretical and practical applications.
- Construct a conclusion using quantitative justification.

Course

After taking this course, you will be able to...

- Summarize core concepts in design, measurement, and analysis.
- Implement statistical techniques.
- Interpret statistical information in figures and tables.
- Formulate statistical conclusions.

COURSE CALENDAR

Module	Readings	Assignments	Due
1: Introduction	Chapters 1 and 3	Discussion, Quiz, and Homework 1	M 6/6
2: Distributions	Chapters 2 and 4	Discussion, Quiz, and Homework 2	M 6/13
3: Probability and Normality	Chapters 5 and 6	Discussion, Quiz, and Homework 3	M 6/20
4: Tests and Effects	Chapters 7 and 8	Discussion, Quiz, and Homework 4	M 6/27
5: <i>t</i> -Tests	Chapters 9 and 10	Discussion, Quiz, and Homework 5	T 7/5
6: ANOVA	Chapters 11 and 12	Discussion, Quiz, and Homework 6	M 7/11
7: Correlation and Regression	Chapters 13 and 14	Discussion, Quiz, and Homework 7	M 7/18
Project Week	None	Final Project	F 7/22

Please see weekly Canvas modules for required and optional course materials not listed on this course calendar. All assignments open during the first week of class and close on the due dates at 11:59pm. There is a 24-hour grace period after due dates, which means that late submissions within this window will be accepted without penalty. Assignments will be submitted electronically on Canvas (see the Assignments tab). Project week provides time to work on the project without other readings or assignments. This calendar is preliminary and subject to change. Any changes will be announced on Canvas.

GRADED ASSIGNMENTS

Discussions

The purpose of the discussions is to provide/receive support and clarification about statistical concepts, principles, or computations. There will be seven discussion forums in this course. In each forum, you will post at least one question about the module's content, as well as provide an answer to another student's question. Excellent questions and answers will clearly draw on relevant materials and will not be excessively redundant with prior posts. Only your five best scores will count toward your grade. The discussions will be worth a total of 100 points (20 points x 5 forums) or 25% of your grade.

Quizzes

The purpose of the quizzes is to provide feedback about your progress in learning statistical concepts and principles. There will be seven quizzes in this course. Each quiz will consist of 20 multiple-choice questions and will focus on one module of content. You will have 30 minutes to complete the quiz and are allowed to take it twice; you will receive the higher score. All quizzes are drawn randomly from larger question pools, which means that all quiz attempts (even for the same student) are unique. Only your five best scores will count toward your grade. The quizzes will be worth a total of 250 points (50 points x 5 quizzes) or 25% of your final grade.

Homeworks

The purpose of the homework assignments is generally to provide feedback about your progress in learning statistical computations. There will be seven assignments in this course. Assignments will consist of a variety of questions and will focus on one module of content. Only your five best assignments will count toward your grade. The assignments will be worth a total of 400 points (80 points x 5 assignments) or 40% of your final grade.

Project

The purpose of the final project is to assess your mastery of statistical concepts, principles, and computations. It will consist of a variety of practical, data analysis problems and will replace the usual exams in statistics courses. The project will be worth a total of 250 points or 25% of your final grade.

Please review the course calendar, Canvas assignments tab, and online materials for additional information and specific due dates for assignments. Grades will be posted on Canvas under Grades and generally within a week of submission. If you feel like you are struggling in this course, please contact the professor to discuss your situation and possible improvement strategies. It might not be necessary to drop the course.

PROGRESS WORKSHEET**Discussions**

1: Introduction _____ / 20 points
 2: Distributions _____ / 20 points
 3: Prob. and Norm. _____ / 20 points
 4: Tests and Effects _____ / 20 points
 5: *t*-Tests _____ / 20 points
 6: ANOVA _____ / 20 points
 7: Corr. and Regress. _____ / 20 points
Subtotal (Best 5 of 7) _____ 100 points

Quizzes

1: Introduction _____ / 50 points
 2: Distributions _____ / 50 points
 3: Prob. and Norm. _____ / 50 points
 4: Tests and Effects _____ / 50 points
 5: *t*-Tests _____ / 50 points
 6: ANOVA _____ / 50 points
 7: Corr. and Regress. _____ / 50 points
Subtotal (Best 5 of 7) _____ 250 points

Grading Scale

A = 930-1000

B = 830-869

C = 730-769

D = 600-669

A- = 900-929

B- = 800-829

C- = 700-729

F = 0-599

B+ = 870-899

C+ = 770-799

D+ = 670-699

Homeworks

1: Introduction _____ / 80 points
 2: Distributions _____ / 80 points
 3: Prob. and Norm. _____ / 80 points
 4: Tests and Effects _____ / 80 points
 5: *t*-Tests _____ / 80 points
 6: ANOVA _____ / 80 points
 7: Corr. and Regress. _____ / 80 points
Subtotal (Best 5 of 7) _____ 400 points

Project

Subtotal _____ / 250 points

Final Points

Discussions _____ / 100 points

Quizzes _____ / 250 points

Homeworks _____ / 400 points

Project _____ / 250 points

Grand Total _____ / 1000 points

TECHNOLOGY REQUIREMENTS

Hardware

This course requires access to a basic computer and a stable internet connection. A webcam would be helpful for optional synchronous labs and office hours appointments. It is not advisable to take this course entirely on a mobile device. This would make it difficult to review documents (such as slide notes) and access statistical software. Thus, you will need to maintain access to a computer throughout the course. For information about UWSP's computer labs, please check out this website: <https://www3.uwsp.edu/infotech/Pages/ComputerLabs/Default.aspx>.

Canvas

This course is administered online through the Canvas website. In Canvas, you will review course materials, participate in discussions, and submit assignments. To access Canvas, you will need a web browser (<https://www.uwsp.edu/canvas/Pages/default.aspx>) or the Canvas Student mobile app for Apple (<https://apps.apple.com/us/app/canvas-student/id480883488>) or Google (<https://play.google.com/store/apps/details?id=com.instructure.candroid&hl=en&gl=us>) devices. All options require your UWSP login and password. If you would like to learn more about how to use Canvas features (such as discussions), please review the helpful resources on their website: https://community.canvaslms.com/t5/Canvas-Student/ct-p/canvas_student. If you need technical support, contact Canvas Support by clicking on the Help button in Canvas.

SPSS

The course will require the use of statistical software. IBM SPSS 28 is recommended for this course and freely available on campus computers or through UWSP's remote lab access. For information on how to setup remote access via your computer, please check out this website: <https://www3.uwsp.edu/infotech/Pages/ComputerLabs/Remote-Lab.aspx>. It is generally okay to use other statistical software for course assignments (such as Minitab, SAS, R, or Jamovi), but instruction will only be provided in SPSS. Please practice remote lab access well in advance of needing to submit assignments, to ensure that it works as expected or to get technical support from the IT Service Desk (<https://www3.uwsp.edu/infotech/Pages/ServiceDesk/default.aspx>).

Netiquette

In an online course, a majority of our communication takes place in the discussion forums. Our primary means of communication here is written. The written language has many advantages: more opportunity for reasoned thought, more ability to go in-depth, and more time to think about an issue before posting a comment. Still, written communication also has some disadvantages, such a lack of face-to-face signaling that occurs via body language, intonation, pausing, facial expressions, and gestures. Accordingly, please be aware of the possibility of miscommunication and compose your comments in a positive, supportive, and constructive manner. You can learn more about netiquette at: <http://global.k-state.edu/students/courses/netiquette/>.

COURSE POLICIES

Attendance

Formal attendance will not be graded in this course. Nonetheless, there will be optional, synchronous labs that focus on statistical software, practice problems, or student questions. Attendance is encouraged and recordings will be made available to everyone.

Communication

Our communication in this course will occur through digital methods. If you want to contact me with a private matter (such as your course grades), you can send an email. I generally respond to emails within 48 hours (excluding weekends or holidays). You can also make an online office hours appointment via Canvas Scheduler. Conversely, if you need to contact me about a public matter (such as asking a question about the final project), you can post in the Frequently Asked Questions (FAQ) discussion forum on Canvas. This allows everyone to ask questions, answer questions, and review answers.

Disabilities

UWSP is committed to reasonable accommodations for students with disabilities and temporary impairments. If you have a disability or acquire a condition where you need assistance, please contact the Disability Resource Center as soon as possible. Check out their website for more information: <https://www.uwsp.edu/disability-resource-center/>.

Extensions

Extensions will generally only be considered for students who cannot complete assignments on time due to academic, athletic, military, or religious obligations, major illnesses, and comparable reasons. Requests for extensions might require documentation, such as letters from coaches or physicians. In most cases, assignments will need to be completed within one week of the initial deadline to receive credit.

Incompletes

Incomplete grades will only be considered for students in exceptional situations, such as serious medical and emergency situations. They are not for students who feel overwhelmed by routine academic or extracurricular commitments. Requests for incompletes must be accompanied by documentation. In most cases, all coursework must be completed within one regular semester (fall or spring) to avoid receiving an automatic F in the course.

Misconduct

The professor takes all academic misconduct (such as cheating and plagiarism) seriously. The minimum penalty for each instance of misconduct will be a zero for the assignment. Additional penalties will be considered under university policy. Please do not put yourself or others through disciplinary hearings. To read about UWSP's policies, go to: <https://www.uwsp.edu/dos/Pages/Student-Conduct.aspx>.

Safety and Reporting

UW-Stevens Point is committed to the promotion of safe, inclusive, and productive campuses—where people from all backgrounds and perspectives can actively and comfortably contribute to our learning communities. Thus, under federal and state laws, as well as university policies, the professor is required to report acts of an offensive or criminal nature that occur inside or outside of class. This includes acts of sexual harassment and assault, bias and hate crimes, illicit drug use, and violence. Disclosure or description of such incidents, past or current, may be reported to the Dean of Students office (<http://www.uwsp.edu/dos/>) or local authorities. If you would like to report incidents anonymously, please review the options on the Dean of Students' website: <https://www3.uwsp.edu/dos/Pages/Anonymous-Report.aspx>.