WEBER STATE UNIVERSITY

DEPARTMENT OF PSYCHOLOGY

PSY 3605: Psychology Statistics Lab (Summer 2020, #10606)

TR 8:00-9:15 AM, Synchronous Via Zoom

General Information

Professor: Sarah Herrmann, Ph.D.
Email: sarahherrmann@weber.edu
Office Location: LH 374
Office Hours: By appointment

Course Overview

WELCOME to Psychology Statistics Lab! The purpose of the course is to apply basic statistical techniques to a variety of types of data. The course will cover statistical processes of data entry and cleaning, descriptive analysis, graphic analysis, and methods of factorial and correlational analysis. Learning outcomes for this course have been developed around the four general learning objectives of the Psychology Department at Weber State University, and are based on recommendations of the APA. The outcomes for the class are as follows:

KNOWLEDGE – Students will understand psychology as a scientific discipline.

1.1 Psychology Statistics Lab Content Knowledge

Students will identify the processes involved in data analysis in the social sciences. This includes learning both graphical and statistical procedures for analyzing group differences as well as correlational relationships.

> *1.1A By the end of the semester, students will be able to identify the different types of statistical analyses and when to use each. (Quizzes)*
>
> *1.1B By the end of the semester, students will be able to compute and interpret both descriptive and inferential statistics. (Assignments)*

APPLICATION – Students will apply psychological principles to explain social research and better understand the results of their own investigations.

2.1 Psychology Statistics Lab Application

Students will apply appropriate statistical methods to a variety of types of data. Students will adequately interpret results of statistical tests.

> *2.1A By the end of the semester, students will be able to use SPSS to conduct each of the analyses covered in class, and will be able to interpret these analyses. This includes running the test, assessing assumptions, interpreting graphics, and interpreting results. (Assignments & Quizzes)*
>
> *2.1B By the end of the semester, students will be able to select the appropriate statistical test to use when given a dataset. (Quizzes)*

VALUES/ETHICS – Students will display an attitude of skepticism and intellectual curiosity about psychological issues. Students will recognize the need for ethical guidelines and will practice ethical behaviors in regard to the field of psychology.

3.1 Psychology Statistics Lab Values
In learning the distinguishing characteristics of statistical methods, students will describe the implications on results of using the wrong method to analyze data, identify data that is biased, and describe the effects of analyzing biased data.

> *3.1A By the end of the semester, students will be able to identify and test the assumptions of each statistical method and identify the biases introduced to their analyses when these assumptions are not met. (Assignments & Quizzes)*

3.2 Psychology Statistics Lab Ethics
Students will summarize relevant information into a written or graphical document that is appropriately aligned with the proper referencing guidelines.

> *3.2A By the end of the semester, students will be able to apply appropriate APA formatting to statistical results.(Assignments & Quizzes)*

COMMUNICATION – Students will professionally communicate their understanding of terms, concepts, and theories via written and oral format.

4.1 Psychology Statistics Lab Written Communication – Logic
Students will explicitly outline logical flow of information from broad to most fine-grained and will present all statistical results in logical form moving from least specific to most specific analyses; this logic will follow the form of "if A then B then C" and all evidence within the document will relate back to this logic.

> *4.1A By the end of the semester, students will be able to write a full APA results write-up that flows from assumptions of each test to results and finally to graphic representation. (Quizzes)*

4.2 Psychology Statistics Lab Written Communication – Clarity
Students will write in a clear and concise manner; appropriate professional language and tone will be used.

> *4.2A By the end of the semester, students will be able to write a full APA results write-up for each of the methods discussed in class. (Quizzes)*

Format

Class meetings will include lectures, demonstrations, exercises, and discussions. To be successful in this course, you must carefully read the course materials and consistently attend lectures.

For this class, you will need access to a computer with a reliable internet connection to watch course lectures via Zoom (https://apps.weber.edu/wsuimages/online/Zoom%20For%20Students.pdf). You will also be utilizing SPSS through Weber Virtual Lab (https://www.weber.edu/virtuallab). If you do not have access to a computer, please visit https://weber.edu/ComputerLabs/laptopcheckout.html for instructions on laptop checkout.

Make sure to log on regularly to the course website for important announcements and useful resources. I am most available and will respond as soon as I can via **email**. I encourage you to use office hours to discuss class or exam material, to ask general questions, or provide comments.

Textbook *(Optional)*

Wilson-Doenges, G. (2014). *SPSS for Research Methods: A Basic Guide*. New York, NY. W.W. Norton & Co. ISBN: 978-0393938821. Any version of the text (e.g., hardback, paperback, e-book) is acceptable.

The book will serve as a supplement to lectures and handouts. From time to time, material in the book will be inconsistent with material presented in class. In particular, some formulas in the book differ from material presented in class (in statistics, multiple forms of the same formula lead to a single final answer). In such cases, my lecture and handouts will supersede the book.

Grading

Final grades will be calculated based on the following:

Attendance (10 x 5 points)	= 50 points
Weekly Problem Sets (10 x 25 points)	= 250 points
Lab Quizzes (4 x 50 points)	= 200 points
TOTAL:	= 500 points

463 – 500 pts.	93 – 100%	A
443 – 462 pts.	90 – 92%	A-
433 – 442 pts.	87 – 89%	B+
413 – 432 pts.	83 – 86%	B
398 – 412 pts.	80 – 82%	B-
383 – 397 pts.	77 – 79%	C+
363 – 382 pts.	73 – 76%	C
347 – 362 pts.	70 – 72%	C-
332 – 346 pts.	67 – 69%	D+
312 – 331 pts.	63 – 66%	D
297 – 311 pts.	60 – 62%	D-
0 – 296 pts.	0 – 60%	E

Grades are earned, not negotiated, and all students receive every possible consideration to ensure that their final grade reflects their performance in the course. Course grades will be adjusted (if necessary) for the difficulty of the class, based on overall performance. Therefore, borderline grades will not be "bumped up" to the next grade, so please do not ask. This consideration is automatic, so negotiations and appeals to the professor are neither necessary, nor accepted, to ensure fairness to all students.

Attendance. Due to the applied nature of this course, attendance is required. Assignments will be handed out and explained during class. Each day of participation will be worth **5 points** for a total of **50 points**.

Weekly Problem Sets. There will be **10** weekly problem sets, worth **25 points** each. Each problem set will require running a statistical analysis, graphically displaying results, and describing these results in a written description formatted to meet APA guidelines. There will be a conceptual and application component to each problem set. Problem sets are due at the end of class on their specified due dates. **Late work will not be accepted.**

Lab Quizzes. Four lab quizzes will be given during the semester. These quizzes will assess conceptual understanding of the concepts covered up to the quiz date. Quizzes are not intended to be

comprehensive, although many of the concepts in statistics build upon one another, or are otherwise related. Quizzes are worth **50 points** and must be completed ***on the due date***, unless authorized by the instructor beforehand.

Course Norms

Attendance. Students are expected to be present and on time for all class meetings. Keep in mind that: (a) in all cases, content delivered in lecture takes precedence over the textbook and other supplementary materials for homework, exams, and so forth; (b) all students are expected to be aware of any announcements made in class; and (c) we practice applying and discussing course material in lecture in ways that will show up on exams, so if you miss class often, you can expect to have considerable trouble on lab quizzes.

E-mail Response Policy & E-mail Etiquette. I will respond to all e-mails within 24 hours on weekdays and within 48 hours on weekends. It is essential to practice proper e-mail etiquette, especially early in your education and career. When sending emails, please include the following: (1) an appropriate subject line (e.g., PSY 3600—reason for e-mail), (2) Address the recipient (e.g., Hello, Dr. Herrmann), (3) state your question in a full sentence (e.g., Today in lecture you mentioned..., I was wondering about...), and finally (4) End off the e-mail with your name (e.g., Best/Thanks/Sincerely, Jane Doe).

How To Do Well in This Course

1. Attend class

- Lecture presentations will be posted on Canvas so you don't have to write everything down. Use shorthand clarifications.
- Note emphasized items and attend to concepts that are repeated or described in several ways.

2. Ask questions of the instructor and your classmates

- Be in regular contact with me. I am committed to your success and here to help.
- Attend office hours.
- Form study groups; another student's input can really help clarify confusing topics.

3. Don't delay in working on course requirements.

- Do *not* wait until the last minute (e.g., 3 AM before an assignment is due) to get help.
- Do *not* wait until you have scored poorly on multiple assignments/tests before you seek help. If you are not doing well after the first few (2-3) weeks, you need to seek help immediately.

University and Course Policies

Specific Accommodations. Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in Room 181 of the Student Services Center (or Room 221 at the Davis Campus). SSD can also arrange to provide course materials in alternative formats upon request. For more information, please see: http://www.weber.edu/ssd.

Academic Integrity. Any academic dishonesty will not be tolerated. If a student is caught engaged in academic dishonesty in this course, they risk failing the course and being subject to academic discipline including the imposition of university sanctions. Please see the university policy on cheating, which can be found in the WSU Student Code, Section IV, Part D, Paragraph 2.

For the purposes of this course, students are encouraged to work together. Discussing the assignment together will not be considered cheating. However, all submitted work should be original. Any student caught submitting identical or closely related work will at the minimum receive zero (0) credit for the assignment and at a maximum a failing grade in the course and be turned in to the appropriate university personnel. The types of activities that would be considered academic dishonesty are as follows: actively copying answers or otherwise using the work of another student on an exam; using the answers of another student on an assignment without having done the work yourself; soliciting other students or agencies to complete and submit work for you.

Inclusivity Statement. Pivotal to Weber State University's mission is the need to embrace and value the diversity of its members. Acknowledging the uniqueness of each individual, we seek to cultivate an environment that encourages freedom of expression. Because the University is a community where inquiry is nurtured and theories are tested, every individual has the right to feel safe to express ideas that differ from those held by other members of the community. However, all persons who aspire to be part of our campus community must accept the responsibility to demonstrate civility and respect for the dignity of others. Recognizing that the proper balance between freedom of expression and respect for others is not always apparent or easy to achieve, we must continually challenge ourselves and each other in an atmosphere of mutual concern, good will and respect. Therefore, expressions or actions that disparage an individual's or group's ethnicity, gender, religion, sexual orientation, marital status, age or disability are contrary to the mission of Weber State University and will are not acceptable in classroom discussion.

Use of Technology. The use of cell phones, smart phones, or other mobile communication devices is disruptive, and is therefore prohibited during class. Students using cell phones, tablets, or laptops for anything other than course work will be asked to leave. Students are permitted to use devices during class for note-taking and other class-related work only.

Emergency Closure Statement. Due to the applied nature of this course, if for any reason the university is forced to close for an extended period of time, class will be cancelled and assignments will be adjusted accordingly. This may include dropping an assignment altogether or rearranging delivery of course topics to cover more in any one class. Look for announcements from the university on Weber e-mail or the website and from the instructor on the course Canvas page. Code Purple is a good way to be alerted to campus closures, and you are encouraged to sign up for it.

***The syllabus provides a general plan for the course; deviations may be necessary. By continuing in the course after reading the syllabus, you indicate that you accept the terms of the syllabus.**

Course Timeline*

Class	Date	Lecture Topic	Readings	Due Dates
1	6/23	Introduction to SPSS, Citrix	Chapter 1	
2	6/25	Graphing in SPSS	*PDF*	**Problem Set #1**
3	6/30	**No Class – Lab Quiz #1**		**Problem Set #2**
4	7/2	Descriptive Statistics	Chapter 2	**Problem Set #3**
5	7/7	Paired *t*-Test	pp. 97-101	**Problem Set #4**
6	7/9	Independent Samples *t*-Test	pp. 81-88	**Problem Set #5**
7	7/14	**No Class – Lab Quiz #2**		
8	7/16	One-Way ANOVA	pp. 89-96	**Problem Set #6**
9	7/21	Two-Way ANOVA	pp. 103-118	**Problem Set #7**
10	7/23	**No Class – Lab Quiz #3**		
11	7/28	Correlation	pp. 51-63	**Problem Set #8**
12	7/30	Simple Regression	*PDF*	**Problem Set #9**
13	8/4	Multiple Regression	pp. 129-136	**Problem Set #10**
14	8/6	**No Class – Lab Quiz #4**		

***This schedule is subject to change.**