Psychology Statistics Lab

Psy 3605, Spring 2016
W 3:30-5:00p, Social & Behavioral Science 337
Office: Annex 5, Lower Level

Dr. Heather Chapman
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Office Hours: By Appointment

Optional Text:

1. SPSS QuickStarts, N. J. Salkind & S. Green

COURSE OVERVIEW & LEARNING OUTCOMES

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 4 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)*

Academic Integrity and Honesty Policy:

Any academic dishonesty will not be tolerated. If a student is caught engaged in academic dishonesty in this course, he or she risks failing the course and being subject to academic discipline including the imposition of university sanctions. For more information, 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.

Students with Disabilities/Requests for 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. To contact SSD by phone: (801) 626-6413 – Ogden; or, (801) 395-3524 – Davis. http://www.weber.edu/ssd

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 will be asked to leave until they are done with their conversation. Students are permitted to use computers during class for note-taking and other class-related work only. Those using computers during class for work not related to class content will be asked to leave.

Contacting the Instructor:
If at any point any student has questions or problems during the semester, please feel free to contact the instructor. Use of the Canvas email system as the initial contact point for the instructor is recommended. Please allow 24-48 hours for a response.

ASSIGNMENTS & GRADING

Course Requirements:
Canvas: All correspondence with students outside of class time will be through use of Canvas, which can be found using the following link: canvas.weber.edu
APA Note: *Please note that all assignments are expected to be double-spaced, and follow correct APA format.*

Attendance (5pts x 13):
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 **70 points**. 65 points make up the attendance portion of your final grade, leaving the potential for 5 extra points for students with perfect attendance.

Weekly Assignments (25pts x 10):
There will be **11** weekly assignments. Each assignment 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 assignment. Assignments are due at the end of class on their specified due dates. Your lowest assignment score during the semester will be dropped. The remaining 10 assignments will be worth **25 points** each. Late assignments are accepted with a penalty. Assignments turned in prior to the next class period will receive a 10% penalty. Those turned in within two class periods of the due date will receive a 20% penalty. **Late work will not be accepted beyond this range.**

Lab Quizzes (50pts x 3):
Three 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 ***in class on the due date***, unless authorized by the instructor beforehand. **Students may bring one 3x5**

note card as a reference for any critical information they feel they need for the quiz. No other materials are to be used on the quiz unless provided by the instructor.

Points Breakdown:

Attendance (5pts x 13)	65 pts
Weekly Assignments (25 pts x 10)	250 pts
Three Lab Quizzes (50 pts each)	150 pts
Total	**465 points**

Grading Scale:

A	93-100%	C	73-75%
A-	89-92%	C-	69-72%
B+	86-88%	D+	66-68%
B	83-85%	D	62-65%
B-	79-82%	F	Below 62%
C+	76-78%		

Changes in Course Assignments and Schedule:

The instructor reserves the right to adjust course readings, assignments, and test dates to best attain the objectives of the course. Any changes will be announced in class, and it is the responsibility of the student to attend class in order to learn about these changes.

Date	Topic	Due
13-Jan	Introduction to SPSS, Descriptives	
20-Jan	Graphing in SPSS	Assignment #1
27-Jan	z-Scores	Assignment #2
3-Feb	One-Sample & Paired t-Test	Assignment #3
10-Feb	Independent Samples t-Test	Assignment #4
17-Feb	**Lab Quiz #1**	
24-Feb	One-Way ANOVA	Assignment #5
2-Mar	One-Way & Factorial ANOVA	Assignment #6
9-Mar	**NO CLASS -- SPRING BREAK**	
16-Mar	Factorial ANOVA	Assignment #7
23-Mar	**Lab Quiz #2**	
30-Mar	Correlation	Assignment #8
6-Apr	Simple Regression	Assignment #9
13-Apr	Multiple Regression	Assignment #10
20-Apr	**Lab Quiz #3**	
27-Apr		Assignment #11