SYLLABUS

Title: Statistics Laboratory
Course: Psychology 3605
Instructor: Doug R. Richards, Ph.D.
E-mail: doug_r_richards@hotmail.com
Year: Fall Semester 2014
Phone: (801) 626-6247; (801) 822-2289 (text is preferred)
Room: Social & Behavioral Sciences 325
Times: Thursday 5:30 pm – 7:00 pm
Office Hours: Monday, 9:30-11:20 AM or by appointment
Office: Social & Behavioral Sciences 356

Text: SPSS QuickStarts by Neil J. Salkind & Samuel 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, 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: Knowledge, Application, Values/Ethics, and Communication. Specifically, 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. Methods covered include, but are not limited to, t-tests, ANOVA, correlation, and regression. Distinguishing characteristics include identification of independent and dependent variables, types of variables used in each method, assumptions of each method and how to remedy unmet assumptions, as well as correct interpretation of results.

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. This will include analysis of assumptions and correct interpretation of both magnitude and size of effect of all results.
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.

3.2 Psychology Statistics Lab Ethics

Students will summarize relevant information into a written or graphical document that is appropriately aligned with the proper referencing guidelines. Students will critique statistical analyses for bias and write results that address these biases when necessary.

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.

4.2 Psychology Statistics Lab Written Communication – Clarity

Students will write in a clear and concise manner; appropriate professional language and tone will be used.

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
### Class Schedule

<table>
<thead>
<tr>
<th>Class Date</th>
<th>Topic</th>
<th>Assignment Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 28&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Introduction to SPSS</td>
<td>#1 Assignment Due</td>
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<tr>
<td>Sep 4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Editing, Creating &amp; Manipulating Data in SPSS</td>
<td>#2 Assignment Due</td>
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<tr>
<td>Sep 11&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Descriptive Statistics</td>
<td>#3 Assignment Due</td>
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<tr>
<td>Sep 18&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Graphing</td>
<td>Quiz #1 Due</td>
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<tr>
<td>Sep 25&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Quiz #1 (covers first four class periods)</td>
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<tr>
<td>Oct 2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Correlation</td>
<td>#4 Assignment Due</td>
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<tr>
<td>Oct 9&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Simple Regression &amp; Hypothesis Testing</td>
<td>#5 Assignment Due</td>
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<tr>
<td>Oct 16&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Statistical Significance &amp; 1 Sample t-test</td>
<td>#6 Assignment Due</td>
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<tr>
<td>Oct 23&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>Quiz #2 (covers last three class periods)</td>
<td>Quiz #2 Due</td>
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<tr>
<td>Oct 30&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Independent T-test &amp; Dependent (Paired samples) T-test</td>
<td>#7 Assignment Due</td>
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<tr>
<td>Nov 6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>1-Way ANOVA</td>
<td>#8 Assignment Due</td>
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<tr>
<td>Nov 13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>2-Way ANOVA</td>
<td>#9 Assignment Due</td>
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<tr>
<td>Nov 20&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Quiz #3 (covers last three class periods)</td>
<td>Quiz #3 Due</td>
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</table>

**Attendance:** Due to the applied nature of this course, attendance is required. I will be taking attendance at the end of the class period. Assignments will be handed out and explained during class. Each class period will be worth **7 pts.** With 13 classes that totals 91 pts. These points cannot be made up except under **extreme** circumstances.

**Assignments:** This is the core of the course. Assignments will be given at the beginning of class and will be due at the end of class or at the beginning of the next class depending on the nature of the assignment. Ten assignments will be given. Each assignment will be worth **30 pts.** Assignments cannot be made up except under **extreme** circumstances.

**Quizzes:** There will be three opportunities to test your practical knowledge of material learned. These quizzes are not purposely comprehensive but often knowledge learned earlier does apply to subsequent material. Understanding and interpretation of material will be emphasized as well as practical knowledge. There will be three quizzes with each worth **100 pts.** Quizzes cannot be made up except under **extreme** circumstances.

**Grading:** The most strict performance standards that I will use (may be modified down according to class performance)

- $A = 94-100\%$
- $A{-} = 90-93\%$
- $B{+} = 87-89\%$
- $B = 83-86\%$
- $B{-} = 80-82\%$
- $C{+} = 77-79\%$
- $C = 73-76\%$
C- = 70-72%
D+ = 67-69%
D = 63-66%
D- = 60-62%
E = below 60%

Point Totals:
- Attendance (13 X 7 pts.) 91 points
- Assignments (9 X 30 pts.) 270 points
- Quizzes (3 X 100 pts.) 300 points

Total points possible 661 points

Use of Technology:
The use of cell phones, smart phones, or other mobile communication devices is disruptive, and is therefore prohibited during class. Except in emergencies, students using cell phones will be asked to leave. 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.

Academic Honesty: as members of the Weber State University academic community, students shall:

1. Maintain academic standards including institutional, school, departmental, program, and individual course standards;

2. Maintain academic ethics and honesty. To this end, the following activities are specifically prohibited:

a. Cheating, which includes but is not limited to:
   
i) Copying from another student's test;

   ii) Using materials during a test not authorized by the person giving the test;

   iii) Collaborating with any other person during a test without authorization;

   iv) Knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of any test without authorization of the appropriate University official
v) Bribing any other person to obtain any test;

vi) Soliciting or receiving unauthorized information about any test;

vii) Substituting for another student or permitting any other person to substitute for oneself to take a test.

b. Plagiarism, which is the unacknowledged (uncited) use of any other person’s or group’s ideas or work. This includes purchased or borrowed papers;

c. Collusion, which is the unauthorized collaboration with another person in preparing work offered for credit;

d. Falsification, which is the intentional and unauthorized altering or inventing of any information or citation in an academic exercise, activity, or record-keeping process;

e. Giving, selling, or receiving unauthorized course or test information;

f. Using any unauthorized resource or aid in the preparation or completion of any course work, exercise, or activity;

g. Infringing on the copyright law of the United States which prohibits the making of reproductions of copyrighted material except under certain specified conditions.

Cheating infractions:

1. The first infraction shall result in a score of 0 (zero) points for the particular test, paper, presentation, activity etc.
2. The second infraction shall result in a failing grade (E) for the course.

Disclaimer: I reserve the right to make changes in a) course schedule, b) course requirements, c) course grading procedures, and/or d) any other aspects of the course at any time. Any alterations will be circumspect and will be made in the best interests of the students, the course, and the instructor.

Emergency Closure Statement:

Emergency Closure: If for any reason the university is forced to close for an extended period of time, we will conduct our class via Canvas. Look for announcements on Canvas. Code Purple is a good way to be alerted to campus closures, and you are encouraged to sign up for it.