

STATISTICS IN PSYCHOLOGY
Weber State University
Psychology 3600, Spring 2010
Class Times: Tuesday and Thursday 10:30 – 11:45 a.m. in SS 317

Professor: Azenett A. Garza, Ph.D.
Office & Office Hours: SS 328D – By appointment mainly, but will be around Tuesdays & Thursdays, 9:00 p.m. – 10:00 a.m.
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Web CT <http://vista.weber.edu> will need Wildcat username and password to access.

Texts: -Statistics for Psychology, 4th ed. By Arthur Aron, & Elaine Aron. Prentice Hall.
-PASW 17 Statistics Made Simple by Paul R. Kinnear and Colin D. Gray 2010 by Psychology Press.
- Workbook & Study Guide for Statistics (To be downloaded by chapter through WebCT).

Learning Objectives

1. The ability to understand and explain to others the statistical analyses in reports of psychological research.
2. A preparation for more advanced course in statistical methods.
3. The ability to identify the appropriate statistical procedure for many basic research situations and to carry out the necessary computations.
4. Further development of your quantitative and analytic thinking skills.
5. The ability to use SPSS to conduct statistical analysis.

Methods of learning and preparing for this class.

1. Reading the assigned material, which includes following the numeric examples closely, writing down questions about anything not entirely clear to you. Reading statistics requires close study and rereading, not just reading through once as you might an ordinary book.
2. Testing your knowledge and reviewing each lecture using the Practice Set II problems or the ones in your workbook.
3. Completing the assigned practice problems. Statistics is a skill-it is necessary to DO statistics, not just read and understand.
4. Attending lectures, listening closely, asking questions- be sure to have done the reading *first*. DON'T fall behind!
5. Studying for, taking, and reviewing answers for exams.

Knowledge of mathematics:

The course does not emphasize mathematics. There will be many calculations, but these require nothing more than elementary high-school algebra. The emphasis, instead, is on understanding the LOGIC of the statistical methods. The most important part of each exam will be either (a) a problem in which you use a statistical procedure to analyze the results of a study and then write an essay explaining what you have done to someone who has no knowledge of statistics or (b) a problem in which you are presented with the results of a study and must explain what they mean to a person who has never had a course in statistics.

Calculators

I strongly encourage you to use a hand calculator for doing your assignments, and I will permit calculators during tests, I would much prefer you to spend your time developing an understanding of the statistical concepts rather than adding and dividing numbers. A simple calculator that adds, subtracts, divides, multiplies, and takes square roots should be of great help. Since you must show your work on all assignments and exams, calculators that also do statistical calculations will not be of much help, so don't feel any pressure to spend a lot of money. About \$15 or less should do.

Evaluation of Course Work

Exams: There will be a total of four exams. Each exam will consist of multiple choice, fill-in-the-blank, short essay questions, and/or computational problems. Each test will be worth 100 points toward your final grade. Bring a #2 pencil and a valid ID to each test. You will be required to purchase a scantron for each exam. **MAKE-UP EXAMS ARE NOT ALLOWED. A missed exam counts as a zero.** IF you know of a conflict with the exam schedule, you may take ANY exam early. However, no exam may be taken late. Early exams will be permitted if advanced notice is given. **If you miss an exam, you must take a final exam to replace your missing test score.** The final exam will be comprehensive (that means it will cover material from the entire course). You have 3 days for each exam, and you are responsible for knowing the testing center hours. They will NOT let you arrive or stay late to take an exam. Please schedule your time wisely! Also, you may replace your lowest exam score by taking the final exam. So if you DO better on the final exam, your lowest score will be replaced by your final exam score. If you miss more than one exam, remember that only one exam grade will be replaced by the final exam score and your second missed exam will receive a 0! Exam questions will be taken from the textbooks and the lecture. You will be responsible for all material covered during the semester regardless of its source. All exams will be taken in a Weber State University Testing Center. Test proctors will not allow you to take an exam without an ID. You will have 3 days to take each exam. Testing Center hours are provided below. The Social Science Testing Center is located in the Social Science Building room 38.

Monday - Thursday	7:30 AM - 8:00 PM (Must show up by 7:00 PM to take an exam)
Friday	7:30 AM - 4:30 PM (Must show up by 3:30 PM to take an exam)
Saturday	9:00 AM - 4:30 PM (Must show up by 3:30 PM to take an exam)

Attendance, Participation & In-Class Work: Class participation and discussion will occur on a regular basis. In addition, there will be MANY class exercises and if you are present and participate, you will get credit for your participation. **You may miss 2 of these days without penalty.** Additional missed days and class assignments will receive 0s. Each day of participation and assignment will be worth 5 points.

Class & Homework Assignments: There will be class/homework exercises given through out the semester. These assignments are included in the workbook and study guide required for this class (which you can download on WebCT) and are labeled multiple choice and practice problems. Although there will be class time devoted to working on some of these assignments, you will be responsible for completing the rest of the assignment at home before the next class period. ALL assignments must be completed by the start of the final exam to pass the course. Assignments are due at the start of each class. Assignments turned in between 5 minutes and 24 hours after they are due are 1/2 late. **Two late assignments will be allowed without penalty.** For each additional late assignment you must write a short paper summarizing in your own words the statistical conclusions of a research article assigned by me. (It is your responsibility to arrange any such make-ups in time to complete them by the start of the final exam). Late assignments will be penalized 2 points for each day they are late (weekends count as two days, Sat. & Sun.) Each assignment will be worth 25 points.

SPSS Assignments: There will be 11 assignments that will require running a statistical analysis of some sort on SPSS and verbally describing the results. These assignments will be due at the beginning of class on their specified due dates. Due dates are listed on the class calendar. **You may miss 1 of these assignments without penalty.** Each assignment will be worth 15 points. Late assignments will be penalized 2 points for each date they are late (weekends count as two days, Sat. & Sun.). Late assignments are better than no assignments.

What is the workload expectation for this course?

In this course, in addition to the 45 hours spent in class or taking exams, you should spend up to 90 hours doing "homework," which include reading the text and documents, writing your assignments, and studying for exams. That equals 135 hours, which is the university standard in-and-out-of-class workload expectation for a three-hour course under the semester system. This is roughly equivalent to 3 hours outside of class per hour spent in class, which is about 9 hours per week.

Extra Credit Options:

You have the option participating in research for extra credit. Extra credit must be turned in by **April, 14th**.

Research participation: You may participate in research projects being conducted in the psychology department. You may do up to 2 hours of research participation. Please see additional handout for more specific information as to how to do this. All research participation must be completed by **April, 14th**. **ABSOLUTELY NO LATE EXTRA CREDIT WILL BE ALLOWED.**

Student Disability Weber State University is committed to equal opportunity in education for all students, including those with documented physical disabilities or documented learning disabilities. Weber State University policy states that it is the responsibility of students to contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary. The instructor will meet with the student and staff members of the SSD to formulate a written plan for appropriate accommodations, if required.

Calculation of Grades

4 Exams	(100 pts. ea.)	60% of your grade
Class/Homework	(25 pts. ea.)	15% of your grade
11 SPSS Assignments	(15 pts. ea.)	15% of your grade
Attendance & Participation	(5 pts. ea.)	10% of your grade

Final Grade

A	93-100%
A-	90-92%
B+	83-89%
B-	80-82%
C+	73-79%

Final Grade

C-	70-72%
D+	63-69%
D-	60-62%
E	0-59%

Final Grades: Please note that due to the policy in which assignments are dropped in most of the categories, extra credit options are available and extra points are usually awarded in exams, final grades are not "rounded up or curved". Meaning that if you have an 89.9 in the class, you will not be

rounded up to an A-, rather you will receive a B+. In the **ONLY** circumstance in which a grade will be rounded is if **ALL** assignments and exams have been completed.

Grade Appeals: *If, after receiving an exam or homework back during class, you think a question is open to more than one interpretation, please do not ask about this during class. Write down on a sheet of paper your challenge to me. The challenge must be submitted within a week after the exam and must explain how the question could be interpreted so that one of the other answers (the one you chose) would be as "correct" as my answer. I will return the challenges with comments either accepting or rejecting the challenge. I encourage you to utilize this option if you feel strongly about a test question. Your challenge must include the following (if any of these components are missing, your challenge will automatically receive no credit): 1) your name 2) your exam with answer sheet 3) the number of the question that you are challenging and what the question is generally asking 4) the CORRECT answer (according to me) 5) YOUR answer, and 6) why YOUR answer is as "correct" as the CORRECT answer. NOTE: Good challenges include citations from lecture notes, text (with page numbers), or assigned articles. Challenge points are almost never given for arguments based on your own life experience, on the simple assertion that your answer is correct, etc. THIS IS THE ONLY WAY that your concerns will be addressed. ONLY written questions and comments THAT YOU SUPPORT will be evaluated.*

Class Attendance: Please note that attendance will be officially taken every class and an excessive number of unexcused absences will result in a lower grade. Class and some homework assignments are given during class. Also remember that tests will cover both reading and lecture material and lectures might often cover material not found in the book. Material to be covered is likely to change. Therefore, it is to the benefit of the student to attend class everyday.

Excused Absences for University-Recognized Activities. "Students who will be absent while representing the University in officially recognized University activities (sports, band, professional conferences, etc.) must notify the instructor ten days prior to absence. Students will be permitted to make up both assignments and examinations in consultation with their instructors

Class Contact: *At times it is necessary to miss a part or all of class. When this happens, it is helpful to have the name and number of another student in the class you can call to answer any questions you may have about any information missed, etc. Please use the space below to write down the name, email, and phone number of at least one student in this class who you can contact:*

CLASS DISRUPTIONS

Students in this course have the right to participate in lecture sessions that are relatively free of any unnecessary noises or other distractions that could impair their ability to take good lecture notes. For this reason, all students attending class will be expected to refrain from the following:

Chronic Tardiness. Students who anticipate being late for class on a regular basis should see me at the beginning of the semester to explain why they will be late. They also should plan to sit in an area of the classroom that will lead to the least amount of class disruption when they arrive. Students who are chronically late (4 or more times) but fail to discuss the problem with me can expect to receive a final grade in the class that is one letter grade lower than is indicated by their total point accumulation in the course.

Early Departures. Students who must leave a class early should discuss their plans with me before the beginning of the class period. Students who expect to make many such departures should talk to me about their plan at the beginning of the semester. Students who depart early from class on a regular basis without permission will be penalized in the same manner as indicated for chronic tardiness.

Inappropriate Behavior. Students engaging in horseplay or disruptive, lecture-irrelevant conversations during a class period will be given up to two warnings to stop their behavior. Following the second warning, disruptive students will be asked to leave the classroom after each additional incident. A petition will be submitted to the Dean's office to drop the disruptive students from the class roster after the second class dismissal. Those dropped from the roster may receive a grade of "F".

Electronic Gadgetry. Students are expected to deactivate all beepers, cellular phones, and watch alarms while class is in session. Any students who disrupts the class more than 2 times during the semester because of these devices will be asked to leave the classroom after each subsequent incident. No walkmans, ipods, or other portable headsets may be worn while class is in session. Tape recorders are permitted in lecture; however, care should be taken to not disrupt class while changing tapes.

VISITORS AND CHILDREN

No child or adult visitors are allowed in class without prior permission.

Academic Dishonesty

PLAGIARISM AND CHEATING

"Plagiarism" means the intentional unacknowledged use or incorporation of any other person's work in, or as a basis for, one's own work offered for academic consideration or credit or for public presentation. Plagiarism includes, but is not limited to, representing as one's own, without attribution, any other individual's words, phrasing, ideas, sequence of ideas, information or any other mode or content of expression. Plagiarism includes purchased or borrowed papers. If you include verbatim text in one of your homework assignments, you must quote the original source. You must put the text in quotes and give the specific citation for the questions. Consider the following hypothetical response as an example.

Contrary to Plato and Descartes who assumed that knowledge and ideas are innate or inborn, Locke proposed that the mind is a "blank slate...on which experience writes" (Meyers, 2003, p. 4). This notion helped lay the foundation for empiricism, or "the view that knowledge originates in experience and that science should, therefore, rely on observation and experimentation" (Meyers, 2003, p. 4).

Plagiarism on a homework, class assignment, or exam will be dealt with in a strict fashion, including receiving a **zero for the assignment** and at the instructor's discretion **may result in a grade of zero for the entire course and possibly a hearing before the Dean of Students**; therefore, it could have serious implications for your academic career (e.g., academic probation, suspension, or expulsion). Please refer to the following web site for a complete listing of infringements (including plagiarism) that constitute cheating: <http://documents.weber.edu/ppm/6-22.htm>

ACADEMIC PROBATION

Students who believe that a poor grade in this course may lead to their dismissal from Weber State University should talk to me BEFORE the first exam about strategies to improve their class performance. Seeing me after the final exam will not be helpful since extra-credit projects and test retakes are not to be available in this course.

Students who do not perform well on the first exam should come and see me immediately to determine ways in which to help improve your scores for the rest of the course. Coming to see me because you are unhappy with your grade after the third or final exam will be of no avail. At that point in time, it is too late to do anything to improve your grade since no extra-credit or test retakes are available in this class.

This Syllabus:

This syllabus is our contract. It details your obligations to me, and mine to you. If there are any problems, questions, suggestions or concerns about it, please bring them up now! Please bring this syllabus to class with you and record any changes in requirements or deadlines on it. **Announcements made in class "count" just as much as policies outlined in the written syllabus.**

By continuing in the course after receiving the syllabus, you are consenting to the regulations set forth by the syllabus and to be evaluated accordingly!!!

Jan. 5	<i>Introduction</i>	
Jan. 7	<i>Statistical Graphing</i>	Chapter 1
Jan. 12	<i>PAWS - computer lab in SS</i>	
Jan. 14	<i>Central Tendency & Variability</i>	Chapter 2
		SPSS 1 Due
Jan. 19	<i>Central Tendency & Variability</i>	Chapter 2
Jan. 21	<i>PAWS - computer lab in SS</i>	
Jan. 26	<i>Review</i>	SPSS 2 Due
Jan. 28	<i>Exam 1, NO CLASSES</i>	Jan. 27-30
Feb. 2	<i>Introduction to Inferential Statistics</i>	Chapter 3
Feb. 4	<i>Introduction to Inferential Statistics</i>	Chapter 3
Feb. 9	<i>Hypothesis Testing</i>	Chapter 5
		SPSS 3 Due
Feb. 11	<i>Hypothesis Testing</i>	Chapter 5
Feb. 16	<i>Power & Statistical Significance</i>	Chapter 6
Feb. 18	<i>Review</i>	
Feb. 23	<i>Exam 2, NO CLASSES</i>	Feb. 19 - 24
Feb. 25	<i>Correlation</i>	Chapter 11
Mar. 2	<i>Correlation</i>	Chapter 11
Mar. 4	<i>Regression</i>	Chapter 12
Mar. 9	<i>PAWS - computer lab in SS</i>	
Mar. 11	<i>Intro to T-tests</i>	Chapter 7
		SPSS 4, 5, & 6 Due
Mar. 15 - 19	<i>Spring Break, NO CLASSES</i>	
Mar. 23	<i>Review</i>	SPSS 7 & 8 Due
Mar. 25	<i>Exam 3, NO CLASSES</i>	
Mar. 30	<i>Independent T-tests</i>	Chapter 8
Apr. 1	<i>Analysis of Variance</i>	Chapter 9
		SPSS 9 Due
Apr. 6	<i>Analysis of Variance</i>	Chapter 9
Apr. 8	<i>Factorial ANOVA</i>	Chapter 10
Apr. 13	<i>PAWS - computer lab in SS</i>	
		SPSS 10 & 11 Due
Apr. 15	<i>Review</i>	
Apr. 16 - 20	<i>EXAM 4</i>	
Apr. 20-22	<i>Comprehensive Exam</i>	

NOTE: This schedule is very likely to change as necessary and it is your duty to attend class to learn about the changes. Test dates rarely change; however, material to be covered on test might and often change. If there is time at the end of the semester, we will return to some of the skipped chapters.

How can I be successful in this course?

- ▶ ***Set up a study schedule, study regularly and keep up.*** Do not put off studying until the last moment. It is very difficult to "cram" several chapters of statistics into your head in one night of frantic studying. Also be sure to allow for study breaks and only study for the amount of time in which you can be alert and awake. You should find a place to study in which there is minimum distractions. Reward yourself with small rewards every time you study to keep you motivated.
- ▶ ***Ask questions and participate in class.*** Do not be afraid to ask questions of the instructor. More than likely, other students in the class have the same questions and concerns. If you can, try to ask a specific/direct question rather than a very general one (e.g., "What is the difference between an interval vs. ratio scale?" vs. "I don't get Chapter 1."). This course is designed for true participation. Please respect your colleagues and be open to perspectives different from your own. You should expect the same respect from all others in the class.
- ▶ ***Keep up on the homework.*** These are not just busy work; they will help you learn and master the material.
- ▶ ***Use your calculator wisely.*** Do not just blindly trust the numbers. Get a feel for what makes sense and use that to your advantage.
- ▶ ***Read the book.*** The textbook may explain something in a slightly different way than the instructor; something that was unclear in class may become clear as you read the text. Read intelligently- a good guideline is to begin examining the chapter by skimming the titles and headings so that you will have an idea about what the chapter will cover. Create questions from the headings that the subsequent material will answer. Then read each paragraph and summarize it in your own words by answering the question posed. If possible, add any personal examples (from your own or friends life, or newspapers, etc) that illustrate the concepts being discussed or devise mnemonics to remember the information being covered. You should print out the outline posted on WebCT before coming to class, examine them for similarities and differences in the information covered from the text. Pencil in any questions that arise as you look over the outline and bring them to class. Read the chapter once more. Next, go through each question that you created and see if you can answer the question out loud in your own words. Do not move to the next section until you have mastered that material.
- ▶ ***Integrate notes from book and lecture.*** After every lecture, be sure you go over your notes, fill in any gaps in your notes. Be sure to look and highlight or note information that is not covered in your text and be sure you understand it, if not ask for clarification during the next class or e-mail me with your questions, or you can post your queries on the class discussion board for your classmates to help. Create your own outline integrating your text and lecture notes, so that the organization of the material fits your perception and understanding of the material. Work from this outline when you study for an exam. **Short on time?** Write questions and summaries in the margins of your text and lecture notes as you read them.
- ▶ ***Study with someone else.*** Studying with someone else or studying with a group is usually helpful; try to secure a study partner or a study group. Oftentimes one student's knowledge can complement another student's knowledge from the class. Many times a peer can explain things better than the text or the instructor. Ask each other questions and practice explaining concepts to each other. Be sure to ask for examples of concepts and application of the concepts.
- ▶ ***Don't skip class.*** A missed class in statistics is often very detrimental to your grade. Statistics is very cumulative, so that if you miss a class, usually the missed material must be mastered before new material can be learned. There will be class exercises and homework assignments that if you miss due to absence, they will decrease your grade and will likely decrease your understanding of the material covered. So, if you miss class and don't get another student's notes, you are likely to miss questions over that material.

- **Learn from your mistakes.** Take a look at the missed questions on your exams and homework and find out why you missed the questions you did. Did you not come to class? Did you not read the book? Were you unprepared for a computational problem? If you find out what went wrong, you can often correct it.

Start your studying and organization of information on the FIRST day!!!

Grade Record

Please keep a record of the grades you receive on all of your work. This will help insure that you are always aware of you academic progress in this class.

Please note the dates of any absences you have had- you are allowed 2 absences without penalty:

Home work #1 _____
Home work #2 _____
Home work #3 _____
Home work #4 _____
Home work #5 _____
Home work #6 _____
Home work #7 _____
Home work #8 _____
Home work #9 _____
Home work #10 _____

Review #1 _____
Review #2 _____
Review #3 _____
Review #4 _____

*Note remember to drop 2 lowest homework

SPSS #1 _____
SPSS #2 _____
SPSS #3 _____
SPSS #4 _____
SPSS #5 _____
SPSS #6 _____
SPSS #7 _____
SPSS #8 _____
SPSS #9 _____
SPSS #10 _____
SPSS # 11 _____

*Note remember to drop 1 lowest SPSS homework

Exam #1 _____

Exam #2 _____

Exam #3 _____

Exam #4 _____

Final Exam _____ (Make up Exam if necessary)

Permissions/Notifications:

If at any time you need to notify me of an upcoming absence, tardiness, or any other circumstance that I need to be aware of or if you have a special request due to some unique circumstance, you are to submit your request in writing preferably both in hard copy and through electronic copy such as e-mail. This procedure will allow me to remember what agreements or arrangements have been made with you.

Syllabus Addendum: H1N1 Flu & Other Emergencies Readiness and Response

Based on recommendations from the Centers for Disease Control (www.flu.gov), local health authorities, and WSU administration, I want to inform you of the following guidelines for our classroom readiness and response to the H1N1 flu this academic year.

Seasonal flu symptoms include fever, coughing and/or sore throat, runny or stuffy nose, headaches and/or body aches, chills, and fatigue. H1N1 flu symptoms are the same as the seasonal flu, but they may be more severe and include vomiting and/or diarrhea. If you have flu-like symptoms, you should self-isolate, or stay away from classes and stay home until you have been free of fever ($\geq 100^{\circ}$ F) or signs of fever for at least 24 hours, without the use of fever-reducing medication. During this period and even if you are taking antiviral drugs for the treatment of the flu, avoid close contact with others, especially those who might easily get the flu (e.g., people age 65 and older, people of any age with chronic medical conditions, pregnant women, young children and infants).

I will no longer require a doctor's note for you to validate your illness in order to waive late penalties on assignments or exams. I am waiving this requirement because doctor's offices and medical facilities may be extremely busy and may not be able to provide such documentation in a timely way and because such visits may only further spread the illness.

That said, I expect you as a responsible member of this learning community to notify me by email (agarza@weber.edu) or phone (801-626-6247, leave a message with the department secretary) if you become ill and will be self-isolating and missing class for a period of time. I expect you to **be mindful of course deadlines and to suggest a plan for completing your assignments in a timely fashion**. I will do my best to accommodate absences in a fair, flexible, and reasonable manner while being mindful of course goals. I will not be so accommodating for students who are absent for a period of time from class without contacting me and then claiming to have been ill. It is your responsibility as a student in my class to communicate about your well-being as it impacts your course performance.

If I become ill and have to miss class or there is some other school/city wide emergency, you should expect to be notified in your course at <http://online.weber.edu> of alterations in course content, delivery of course content, and/or course structure.

Take care of yourself! Clean your hands with soap and water or an alcohol-based hand rub often, especially after using tissues or coughing/sneezing into your hands. Cover your coughs and sneezes, preferably by coughing or sneezing into your elbow rather than your hands. Get plenty of rest. And finally, get medical attention right away if you: 1) have difficulty breathing or chest pain, 2) have purple or blue discoloration of your lips, 3) are vomiting and unable to keep liquids down, or 4) show signs of dehydration, such as feeling dizzy when standing or being unable to urinate.

Please initial, sign, & turn in to professor in order to receive credit and remain in this class.

_____ I understand that if I miss an exam my Make Up Exam will be the final exam.

_____ I understand that late assignments will be penalized 2 points per day including weekend days.

_____ I understand that daily attendance will be taken and that only two absences will be dropped.

_____ I understand that there is only 1 choice for extra credit and that extra credit must be completed by April 14th.

_____ I understand that grade appeals on exams must be done on paper as instructed on the syllabus.

_____ I understand that excessive tardiness, early departures, inappropriate behavior, disruption by electronic gadgetry could result in being asked to leave the classroom on that day or could result in a grade that is one letter grade lower than is indicated by my total point accumulation in the class.

_____ I understand that if I demonstrate any sort of academic dishonesty in any coursework, quiz, assignment, paper or exam in this class, I will receive a 0 on the assignment and could receive a 0 in the entire class if the professor deemed it necessary.

_____ I understand that any request or notification must be done on the form provided with this syllabus.

_____ I understand and agree to behave and treat my fellow classmates and professor with respect.

_____ I understand that announcements made in class "count" just as much as policies outlined in the written syllabus.

_____ I understand that final grades will not be "rounded up" even if I am only one tenth of a decimal away from a higher letter grade.

_____ I understand that I must check my e-mail and WebCT regularly to receive announcements about possible changes to course delivery to due professor illness or city/school emergency.

_____ I understand that if at any time I am in disagreement and unwilling to abide by the policies outlined in the written syllabus, I have the right to drop this class.

My signature indicates that I understand the PSYC 3600 syllabus and have agreed to become a member of this learning community as described in the requirements for Statistics in Psychology.

(NAME)

(DATE)