

PSY212: Statistics

Instructor: Dr. Sharon Himmanen

Class times: Wed, 6:00-8:20pm, 8:30-9:30pm

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Office Hours: Wed. 2-4pm, by appointment

Description: An introduction to the scientific field of research and data analysis required for working in any area of psychology. Topics include: qualitative and quantitative experimental methods, selection of participants, validity and ethical considerations, literature searches, and composing APA-style documents. The SPSS computer package will be introduced along with descriptive statistics, and small experiments will be conducted.

Prerequisites: PSY100, PSY211

Goals: This course will provide you with proficiency in the following:

- Organizing and summarizing data sets
- Visual presentation of data using graphs
- Calculating descriptive and inferential statistics by hand and using Excel and SPSS
- Interpreting the results of inferential statistical tests
- Understanding which statistical tests are appropriate for a given data set

Required textbook:

*Gravetter, F.J. & Forzano, L.B. (2009). *Research Methods for the Behavioral Sciences* (3rd Ed.). Belmont, CA: Wadsworth/Thomson Learning. ISBN: 978-0-495-50978-3.

Gravetter, F.J. & Wallnau, L.B. (2008). *Statistics for the Behavioral Sciences* (8th Ed.). New York, NY: Wadsworth/Thomson Learning. ISBN: 978-0-495-60220-0.

American Psychological Association. (2009). *Publication Manual of the American Psychological Association*. (6th Ed.). Washington, DC: APA. ISBN: 978-1-557-98791-4.

*Though we will mainly be using the Gravetter and Wallnau book this semester, I will refer to Gravetter and Forzano from time and time. You should keep it available for review, as well as your notes from last semester.

Other material: I would recommend purchasing a good calculator. It should, at minimum, have a square root function on it ($\sqrt{\quad}$), but can also have a STAT mode on it as well. For exams, the department provides basic calculators.

COURSE POLICIES Please read this section carefully. You are responsible for knowing this information.

Psychology Department Attendance Policy: The Psychology Department is committed to the principle that regular and punctual class attendance is essential to the students' optimum learning and successful academic achievement. Regular class attendance is a student obligation, and students are responsible for all work, tests and written assignments. Therefore, students are expected to be present for all class sessions. The Psychology Department's attendance policy recognizes that there will be times when attendance at class is not possible. You may think of the policy as being similar to the type used in the corporate world where each employee is given a certain number of "personal/sick days." Based on the number of regularly scheduled class meetings, you will be allowed a certain number of absences (see below) with no consequences, no questions asked. In other words, there is no distinction between excused and unexcused absences. You are of course responsible for anything covered during those missed classes, and for submitting assignments on time, regardless of whether or not you attend. Beyond the allowable number of absences, there are consequences that will adversely impact your grade, much as missing too many days of work can adversely impact your employment status. Above all else, you should carefully consider each decision to not attend class, as once your allotted absences have been used, they are gone. It is important that students arrive for class on time. Late arrivals are very distracting, not only to the instructor, but also to fellow students. Repeated late arrivals are not acceptable and will be addressed. It

is each student's responsibility to understand this policy and to keep track of absences throughout the semester.

Application to this Class: Formal attendance will be taken during all class sessions. This class meets once per week (14 class meetings). You may miss **2 classes** without penalty. If you miss **3 classes**, your final grade (cumulative percentage of points) will be lowered by 5%. That means that if you have earned 84% of the available points in the class, which is a B grade, you would be lowered to 79%, which is a C+. Likewise, if you have earned 77% of the points available, the penalty would take you down to 72%, which is a C-. As a reminder, a C grade (73%) is required in all Psychology courses. If you miss **4 classes**, you will be docked an additional 5% points off of your final grade (for a total of 10%). If you miss **5 classes**, you will receive a failing grade for the course.

Cell phones: Cell phone ringers must be turned off for class. Vibrate mode is fine as long as students do not disrupt the class by checking their cell phones or leaving the room in the middle of the lecture or discussion unless absolutely necessary. During exams, cell phones must be placed out of sight and not taken out at any point during the exam.

Changes: Students are responsible for knowing about changes to the syllabus. All changes will be clearly announced in class, and an updated version of the syllabus will be available via eCollege. It is highly unlikely that any major due dates, such as paper due dates or exams, will be changed. However, not knowing about a change does not constitute an acceptable excuse for late papers or missed exams.

Cheating: Cheating is against the college's code of conduct, and will not be tolerated. If you are caught cheating you will immediately fail the course, and I will turn over all evidence to the psychology department for further disciplinary action.

eCollege: All students must be able to access eCollege. I post all course material there, including any updated versions of the syllabus. All questions outside of class time will be directed to the eCollege discussion boards so that all students may benefit from and participate in the discussion. Also, in the unlikely event that class will be cancelled, an announcement will be made as early as possible on eCollege. Most importantly, any handouts will be made available on eCollege. If you are having difficulty accessing eCollege, please contact IT Services for assistance.

Late papers: Please turn all assignments in on time for full points. Late homework assignments will not be accepted. You may turn the assignment in to me and I will check it, but if it is late you will not receive any points for it. A paper is late when you turn it in after I have collected all the homework due that particular day.

Make-up exams: If an emergency arises, and you must miss an exam, please contact me as soon as possible, I will allow students to make-up a missed exam under certain, documented circumstances, such as illness, a family emergency, etc. Make-up exams are given at my discretion, so please document the reason for your absence as thoroughly as possible.

Taping: Please do not record lectures without checking with me first. Attending class, taking notes, and doing the readings should be sufficient. My experience is that taping lectures makes students less likely to take good notes or pay attention in class.

Textbook: The textbook is an important source of information for the course, and I recommend strongly that you buy the edition specified above. If you do buy an earlier edition, you will be responsible for any differences between the current text and the one you are using.

Dates	Lecture	Reading	Homework	Lab
1/20	Introduction / Frequency distributions	1 & 2		
1/27	Measures of Central Tendency	3	Ch. 1: 18; Ch 2: 4, 10	Measures of Central Tendency
2/3	Measures of Variability	4	Ch.3: 4, 26, 28	Measures of Variability in Excel
2/10	Normal distribution, z-scores / Review	5	Ch.4: 10, 22, 28	Proficiency exam 1
2/17	Exam 1	Ch. 1 – 5	Ch.5: 2, 12, 24	
2/24	Probability / Sampling distributions	6 & 7	Ch.6: 20; Ch.7: 10, 22	Single-sample z-tests
3/3	Hypothesis testing / t-tests	8 & 9	Ch.8: 6; Ch.9: 22, 24	t-tests
3/17	t-tests / Estimation / Review	10, 11 & 12	Ch.10: 18; Ch.11: 24; Ch.12: 6	Proficiency exam 2
3/24	Exam 2	Ch. 6 - 12		
3/31	One-way ANOVAs	13 & 14	Ch.13: 26; Ch.14: 6	One-way ANOVA
4/7	Two-way ANOVAS	15	Ch.15: 24	Two-way ANOVA
4/14	Correlation & Regression	16 & 17	Ch.16: 14; Ch.17: 18a,b,c, graph	Correlation & regression
4/21	Chi-square / Review	18	Ch.18: 2, 22	Proficiency exam 3
4/28	Exam 3	Ch. 13 - 18		

Grading:

Your final grade will be based on the following:

Lab Proficiency Tests – 3 assignments, worth 20 points each, due at the end of the lab day indicated on the syllabus. These will be open notes and open book, and must be completed during the lab time allotted. The proficiency test will involve a series of questions for which you must analyze the data as indicated using Excel or SPSS and answer some questions. 60 points possible.

Exams – There will be three non-cumulative exams worth 100 points each. Material covered in lecture and the textbook will be on the exams. 300 points possible.

Homework – You must turn in 10 of the 11 listed homework assignments. I will choose one question at random to grade, and I will check to make certain the entire assignment is complete. 50 points possible. You will be graded as follows:

Complete and correct = 5; Complete and incorrect = 3;
Incomplete and correct = 1; Incomplete and incorrect = 0

With respect to homework, please do the following for every problem:

Answer all parts of the questions

Show all work

Clearly label each question and each part of the question

Keep your work neat and organized

For calculations and brief text answers, please circle your final answer

See attached example of a properly completed homework assignment

Therefore, your final grade will be based on your percentage of points earned out of a total of 410 (300 + 60 + 50). You may use Table B as a guide to grading.

PLEASE NOTE: You MUST receive a grade of C or better for this course to have it count toward the psychology major.

You may use Table A to keep track of your grades.

Table A

Homework											
1	2	3	4	5	6	7	8	9	10	11	Total

Exams			
1	2	3	Total

HW	
Exams	
PE	
Total	

Proficiency exams			
1	2	3	Total

Table B

Range	Grade	Range	Grade	Range	Grade	Range	Grade	Range	Grade
		357-368	B+	316-327	C+	275-286	D+	0-245	F
381-410	A	340-356	B	303-315	C	358-374	D		
369-380	A-	328-339	B-	287-302	C-	246-257	D-		