

## PSYC 200 Statistics Winter 2018

### **Contact Info:**

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### **Course Objectives and Organization:**

Psychology is an empirical science and this means that theories in this field must be substantiated with quantitative measures and empirical evidence. Thus, the use of statistics is an integral part of all scientists' "bag of tools". Thus, it is important for every psychology major to have a fundamental knowledge of statistics. With that said, however, it is important to point out that it is also the case that we come into contact with statistical reasoning in our everyday lives, some of it is correct and some of it is not. Perhaps, you have even heard that statistics lie and/or that you can make statistics say anything. This statement is completely false and is only true due to the naïveté of the producer of statistics in question or due to the naïveté of the consumer of the statistics. Thus, the goal of this course is to provide every student with the ability to be skilled producers and consumers of statistical information, which can either be used as a basis for further scientific study or at the very least as a weapon against those that may attempt to mislead you with faulty statistical information.

### **Texts and Resources:**

Required Text & Study guide (2 books): R.B., McCall. Fundamental statistics for behavioral sciences (2001-eighth edition) available in the college bookstore.

### **A guide for doing well in this course**

#### *Reading*

Your first contact with the material should be through the reading. You should complete reading on a particular subject prior to the class that will focus on that topic. You may or may not fully understand the concepts through the reading, but by reading this material prior to the lecture you will prime your memory to encode the information that is discussed in class, and you will also be prepared to ask questions regarding the material that you did not understand in the reading.

#### *Assignments*

At the end of almost every class you will be assigned homework problems either from the study guide or other problems that will be handed out in class. These assignments will be due at the beginning of the next class. Usually five students' assignments will be collected at random for grading each day. Other students that would like feedback on their homework can also turn it in at any time if they are not one of the five students whose work must be handed in. **Sometimes, however, the homework will be collected from all students.** This means that every student will have their homework collected several times during the semester and your homework grade will be based on

the number of times you are required to turn it in. For example, if you are chosen at random 2 times and all students are required to hand in the assignment another 2 times during the semester and you do not have the homework done on one of those times, your homework grade will be marked down 25 percent. If you don't have it done twice then your homework grade will only be a 50, and so on. Students will not be allowed to turn in their work late. **Thus, you should bring your completed homework to every class session with the understanding that you may have to turn it in. There will be no exceptions!**

### *Quizzes*

Quizzes will be given on a semi-regular basis either at the beginning or end of the class period. These quizzes and the topics covered on each will be announced in the class period before the class in which the quiz will be given. For example, a Wednesday quiz will be announced on Monday. No make up quizzes will be given, but one low quiz grade will be dropped prior to the calculation of your quiz average.

### *Exams*

There will be three exams given. There will be two midterm exams and a final. **Make up exams will only be given in the most extreme of verifiable circumstances, and will be given at a time during the final exam week.**

### *Attendance*

Students are responsible for all material whether they are in class or not. Make arrangements with a colleague to obtain material missed in an absence. Do not come to office hours expecting a make up lecture. Taping the classes is allowed and encouraged.

### *Special Needs*

Students with special needs are encouraged to approach the instructor privately so that accommodations can be made.

### *Conduct & Misconduct:*

**Matriculation at the College is taken to signify implicit agreement with the Academic Honor Code, available at [honorcode.union.edu](http://honorcode.union.edu). It is each student's responsibility to ensure that submitted work is his or her own and does not involve any form of academic misconduct. Students are expected to ask their course instructors for clarification regarding, but not limited to, collaboration, citations, and plagiarism. Ignorance is not an excuse for breaching academic integrity.** Students' assignments should be their own work, and credit for others' work (i.e., any references used) should be made according to the standards of academic research. Plagiarism will not be tolerated. As mentioned above students may consult with one another regarding questions that they may have, but any assignments turned in should be a product of their own work. **Thus homework, quizzes or tests that are found to be very similar will be referred to the Honor Code committee.**

### *Grading*

Assignments and exams will be weighted as follows:

15%, Midterm 1

15%, Midterm 2

25%, Final Exam

15%, Homework assignments

10%, Class participation effort

20%, Quizzes

Grades will be based primarily on the following guidelines, but may take into account the class curve and the student's progress through the term:

93-100-----A

90-92-----A-

89-----B+

83-88-----B

80-82-----B-

79-----C+

73-78-----C

70-72-----C-

60-69-----D

<59-----F

<b>Lecture Topic</b>	<b>Chapter</b>
Statistics in society	1
Defining data	2
Characteristics of a distribution: Frequency	3
Characteristics of a distribution: Central tendency	3
Characteristics of a distribution: Variability	3
Exploring data	4
Standard Scores	5
<b>Midterm 1</b>	TBA
Regression	6
Correlation	7
<b>Midterm 2</b>	TBA
Sampling	8
Probability and Hypothesis testing	9 & 13
T-Tests	10
Single-Factor ANOVA	14
Two factor ANOVA	15
<b><u>FINAL EXAM</u></b>	<b>TBD</b>