

# INTRODUCTION TO STATISTICS

## PSYCHOLOGY 301; Section 005

Fall, 2009

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Personal Consultations: Please do not hesitate to ask me or my teaching assistant questions. If our office hours do not meet your schedule, we will gladly set appointments with you for other times. Feel free to call me at my office, but the best way to reach me is by email.

\*Note: I have been randomly selected as a potential juror for the month of September. In the event that I am required to serve jury duty, the class will be covered by the TA or other faculty member during this time.

**Lecture meeting times:** Tuesday, Thursday from 12:00-1:50 pm in 341 MARB

**PRE-REQUISITS:** Psych 101, 111, 210

### *Course syllabus and information subject to change*

**COURSE OBJECTIVES:** By the end of the semester you should be able to . . .

- Understand and explain to others the statistical analyses reports of psychological research
- Identify the appropriate statistical procedure for many basic research situations and carry out the necessary computations
- Work in a group setting to share knowledge about statistics
- Apply statistics to your everyday life!

### **REQUIRED TEXT & RESOURCES:**

Text: *Simple Statistics*, by Colin Key

This is the main text for which you will be responsible for readings. While I will try to cover most everything from the text in class, this will likely be difficult material for most students. Thus, it is important to keep up on assigned readings because you will increase your chances of successfully mastering the concepts, and you will be responsible for this material on exams.

Calculator: Although you'll need a calculator, it doesn't have to be fancy. It should be able to calculate square roots, exponents, and have a memory function. Calculators with variance, standard deviation, mean, graphing, and other statistical functions are nice, but you will not be allowed to use these functions on the exams.

### **ATTENDANCE/ IN-CLASS ASSIGNMENTS:**

To fully understand the material for this course it is highly recommended that you attend **all** the lectures. Each class will build upon the prior class; missing just one class can put you at risk for falling behind (**this point cannot be emphasized enough**). Also, research has shown that significantly more information can be retained when students are actively engaged with the material through structured activities and discussion groups. Therefore I will have discussion topics or similar activities prepared for class. Although I understand that occasionally circumstances may prevent you from attending, you are still responsible for the material discussed that day. Please contact one of your classmates for missed materials (please do not e-mail me for them). If you need further clarification, please contact the TA.

\*Note: due to concerns about possible N1H1 flu epidemic, please do not attend classes if you are exhibiting flu-like symptoms. Arrangements may be made to complete course requirements electronically. See <http://flu.byu.edu/> for more information.

Names and phone numbers (or email addresses) of 2-3 people in the course you can go to for notes, etc.:

- 1.
- 2.
- 3.

**HOMEWORK LAB:** Each Tuesday the last half of class time will consist of a “lab” component to give you “hands-on” experience to apply what you are learning in class. This will be conducted by my teaching assistant. This time is set aside for you to ask questions related to your homework assignments and to work through problems with your classmates. Take advantage of this time by coming prepared with specific questions or problems from the homework you want to review. These homework assignments will always be due in class for the week in which they are assigned (please see schedule). Homework assignments will be recorded if completed, rather than graded. The purpose of these assignments is to give you practice working out problems that will prepare you for major exams. It is your responsibility to ask for help if you don’t understand something. Homework assignments will constitute 10% of your total grade.

Your Classmates: Please feel free to work in groups on your homework assignments. While you will be required to turn in your own assignments, you may work on them together. Studying together may also help you to understand and to practice explaining concepts which will in turn better prepare you for exams.

### **QUIZES:**

The minimal objective quizzes are intended to give students frequent feedback concerning their mastery of essential instructional objectives. The questions included on the quizzes are carefully selected to represent only those outcomes that are regarded as basic. Quizzes will be given in class on the dates indicated with an asterisk (\*) in the course syllabus. Each quiz will consist of 12-15 items.

### **FINAL PROJECT**

The data analysis project will require that you 1) compute by hand and verify via computer output relevant analyses for a given data set and 2) write (type) the results in APA manuscript format. The completed project will be due the last day of class.

**EXAMS:**

There will be three major exams. The major exams are not comprehensive; however, they do build upon those concepts previously covered. The major examinations differ from the minimal objective quizzes in one important respect. The major examinations are designed to determine the degree to which students have achieved more advanced course objectives, e.g., ability to interpret or translate concepts and principles given novel situations, the ability to analyze various empirical findings and the appropriateness of their interpretations and/or assumptions, etc. Because the major exams are designed to tap more complex and subtle outcomes, students typically find them more challenging than the minimal objective quizzes.

Exams will be administered in the testing center and you will be allowed to take the exams over a number of days. The testing center hours for fall semester are as follows: Monday 10am-10pm, Tuesday-Saturday 8am-10pm, Saturday 10am-4pm. Keep in mind that the last test is given out 1 hour before closing and the Testing Center will be closed Tuesdays from 10:45 to 12:00 noon for University Forums and Devotionals. For additional information on the testing center, go to <https://testing.byu.edu/>. Plan ahead!

**LATE POLICY:**

Since exams will be available to take in the testing center over the course of a number of days, no late exams will be permitted. Any late assignments will automatically receive 15% deduction in grade unless a legitimate excuse (i.e. severe illness or death in family) is documented. Being unprepared, busy, forgetting, or going on vacation are not legitimate excuses. If you anticipate being unable to make a deadline notify me in advance so that I can arrange an alternate deadline. You are always welcome to turn in assignments in advance.

**GRADING:**

Exam 1	20%
Exam 2	20%
Exam 3	20%
Homework Assignments	10%
Quizzes	20%
Final Project	10%
	100%

A	94-100	B-	80-83	D+	65-69
A-	90-93	C+	77-79	D	62-64
B+	87-89	C	73-76	D-	60-61
B	84-86	C-	70-72	E	<59

Disputes/Appeals: Any disputes over grading should be submitted to me in writing within 1 week of receiving your exam or assignment grade, clearly stating the perceived discrepancy in grade (see grade appeal form). All submitted grading appeals will be carefully reviewed and if needed will be discussed with you. If the dispute is valid appropriate changes will be made. Changes are based solely on merit—no partial credit is given simply for trying to make an argument.

**EXTRA CREDIT:** You may have the opportunity to participate in selected research for extra credit. Although I can't guarantee the extent of the opportunity that will exist, I want to encourage you to seek out and participate in research studies. The maximum extra credit you may receive is three percentage points (which is equivalent to 6 hours of participation). This amount may bump your grade up one grade level. Please be sure to have the experimenter sign the participation form and indicate the number of hours involved in your participation.

## **HONOR CODE & OTHER ISSUES:**

### Academic Dishonesty/ Honor Code Standards

BYU students should seek to be totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including plagiarism, fabrication or falsification, cheating, and other academic misconduct. Students are responsible not only to adhere to the Honor Code requirement to be honest but also to assist other students in fulfilling their commitment to be honest. (complete version of the Academic Honesty Policy available at [honorcode.byu.edu](http://honorcode.byu.edu))

Students are also expected to adhere to the Dress and Grooming Standards. Adherence demonstrates respect for yourself and others and ensures an effective learning and working environment. It is the university's expectation, and my own expectation in class, that each student will abide by all Honor Code standards. Please call the Honor Code Office at 422-2847 if you have questions about those standards.

### Preventing Sexual Discrimination and Harassment

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education and pertains to admissions, academic and athletic programs, and university-sponsored activities. Title IX also prohibits sexual harassment of students by university employees, other students, and visitors to campus. If you encounter sexual harassment or gender-based discrimination, please talk to your professor; contact the Equal Employment Office at 801-422-5895 or 1-888-238-1062 (24-hours), or <http://www.ethicspoint.com>; or contact the Honor Code Office at 801-422-2847.

Students with Disabilities: Brigham Young University is committed to providing a working and learning atmosphere that reasonably accommodates qualified persons with disabilities. If you have any disability that may impair your ability to complete this course successfully, please contact the University Accessibility Center located in 2170 WSC (801-422-2767). Reasonable academic accommodations are reviewed for all students who have qualified documented disabilities. Services are coordinated with the student and instructor by the SSD office. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures. You should contact the Equal Opportunity Office at 301-422-5895, D-282 ASB.

Learning Outcomes: Each program at BYU has developed a set of expected student learning outcomes. These will help you understand the objectives of the curriculum in the program, including this class. To learn the expected student outcomes for the programs in this department and college go to [<http://learningoutcomes.byu.edu>](http://learningoutcomes.byu.edu) and click on the College of Family, Home and Social Sciences and then this department. We welcome feedback on the expected student learning outcomes. Any comments or suggestions you have can be sent to [<FHSS@byu.edu>](mailto:FHSS@byu.edu).

Class Room Etiquette: Cell phones should be turned off in class. Laptop computers are welcome as long as you are taking notes and not distracting others (surfing the web, answering email, playing games etc.) Texting, reading the paper, sleeping, and side conversations during class time are disruptive to learning and rude—don't do it!

Flu policy

As are all large communities, BYU is preparing for the potential of the H1N1 influenza virus to spread rapidly throughout the campus during the coming winter. Details of BYU's preparation, and advice on what you can do to prepare, can be found at [flu.byu.edu](http://flu.byu.edu). Please read it! In order to contain any possible infection, the administration has advised course instructors to ask any student who is feeling sick with flu-like symptoms (fever with either sore throat or cough) to remain home, away from class and away from all large gatherings. Sick students should remain at home until at least 24 hours after the fever has gone away. Students should also call their doctor or the student health center for advice as soon as possible.

The administration has asked course instructors to provide adequate make-up opportunities for all work missed during a flu-like illness. Accordingly, I will allow all time as needed to miss class during an illness and to make up work at a reasonable time afterward, provided the student provides a doctor's note to document the illness. ALL students who feel sick with fever and sore throat or cough should call the doctor and visit if so advised. If advised to visit the doctor, please obtain a note whether or not you are diagnosed with the flu! When you are ill please call or email your TA or the instructor as soon as possible, and *continue to communicate* with us until you are well. You should also be in contact as much as possible with one or two class members, in order to keep up on what you miss. We will try to facilitate class communication from the beginning of the semester.

For your protection, your instructors will follow the same rules! If your instructor is sick he or she will try to find a replacement to carry the class forward, else will notify students as soon as possible about a class cancellation.

## Tentative Schedule

Following is a tentative schedule of class discussions and of the assigned readings and exercises for each assigned chapter from the Howell text. Please read each chapter by the day we *begin* discussing it. Please be prepared to hand in chapter exercises on the day *following* the last day of discussion for each assigned chapter.

	Chapter	Assignments Due
<b>Week 1</b> September 1 September 3	<b>1</b>	
<b>Week 2</b> September 8 September 10	<b>2,3</b>	
<b>Week 3</b> September 15* September 17	<b>4,5</b>	<b>Quiz 1 (Tuesday in class)</b>
<b>Week 4</b> September 22 September 24	<b>6</b>	
<b>Week 5</b> September 29 October 1	<b>7</b>	<b>Exam 1 (covers chapters 1-4) In testing center 10/2-10/3 (10/5 pay)</b>
<b>Week 6</b> October 6 October 8	<b>8</b>	
<b>Week 7</b> October 13 October 15*	<b>9</b>	<b>Quiz 2 (Thursday in class)</b>
<b>Week 8</b> October 20 October 22	<b>10</b>	
<b>Week 9</b> October 27* October 29	<b>11</b>	<b>Quiz 3 (Tuesday in class)</b>
<b>Week 10</b> November 3 November 5	<b>12</b>	<b>Exam 2 (covers chapters 5-8) In testing center 11/6-11/7 (11/9 pay)</b>
<b>Week 11</b> November 10 November 12	<b>13</b>	
<b>Week 12</b> November 17 November 19	<b>14,15</b>	

<b>Week 13</b> November 24 November 26		<b>No class attend Friday class Thanksgiving Holiday</b>
<b>Week 14</b> December 1 December 3*	<b>16</b>	<b>Quiz 4 (Thursday in class)</b>
<b>Week 15</b> December 8 December 10	<b>17</b>	
<b>Reading Days</b>	December 11-12	
<b>Week 16</b> December 14- 18	<b>FINAL EXAM in the testing center</b>	<b>Exam 3 (covers chapters 9-13)</b>

**EXTRA CREDIT FORM**  
& Experiment Evaluation

Student: Thank you for participating in this research. Please fill in the upper and lower portions of this form, tear in two, and turn the upper portion into your instructor (the lower portion is for you records).

Student's Name \_\_\_\_\_

Course Number \_\_\_\_\_

Name of Experiment \_\_\_\_\_

Tester's Signature \_\_\_\_\_

Hours of Participation (to the quarter hour) \_\_\_\_\_

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Please answer the following questions carefully. This form is your opportunity to have input into the experiment-participation system for undergraduate psychology students. Separating this form into two parts will preserve your anonymity.

1. How long did the experiment last (approximately) \_\_\_\_\_
2. Was the experimenter on time? Yes\_\_\_\_ No\_\_\_\_
3. Was the experimenter courteous? Yes\_\_\_\_ No\_\_\_\_
4. Did you receive clear instructions on your task? Yes\_\_\_\_ No\_\_\_\_
5. Did you receive a clear explanation of the study? Yes\_\_\_\_ No\_\_\_\_
6. Did you have sufficient opportunity to ask questions? Yes\_\_\_\_ No\_\_\_\_
7. Were you aware that you could withdraw from the experiment at any time and still receive some experimental credit? Yes\_\_\_\_ No\_\_\_\_

8. Please rate the experiment on the following dimensions (circle one per item).

	Poor		Average		Good
A) Educational value	1	2	3	4	5
b) Interest level	1	2	3	4	5
c) Overall rating	1	2	3	4	5

9. General comments or criticism (if any):