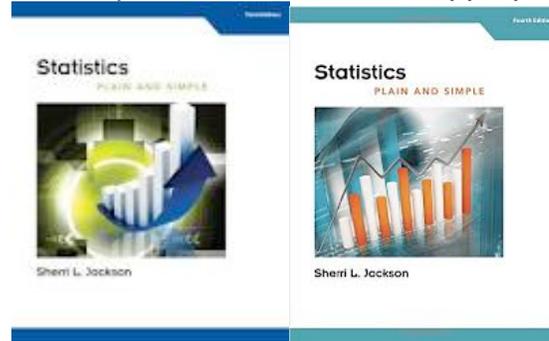


**PSY2100-004 Statistical Methods / Spring 2017**  
**9:30-10:45am T/R University Hall 5000**

<p><b>Instructor:</b> Jaclynn Sullivan Office: UH 5010C E-mail: <a href="mailto:Jaclynn.sullivan@utoledo.edu">Jaclynn.sullivan@utoledo.edu</a> <b>Office hours: T/R 11am-12:30pm</b> *if you need to meet me at another time, please email me for availability</p>	<p><b>Graduate TA:</b> Alyssa Chapman Office: UH 5014 Email: <a href="mailto:achapma13@utoledo.edu">achapma13@utoledo.edu</a> <b>Office Hours: M/W 10-11:30</b></p> <p><b>Undergraduate TA:</b> Joslyn Reisinger Email: <a href="mailto:Joslyn.Reisinger@rockets.utoledo.edu">Joslyn.Reisinger@rockets.utoledo.edu</a></p>
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**Course Information**

Required Texts: *Statistics: Plain and Simple* 3<sup>rd</sup> or 4<sup>th</sup> edition (Jackson) – these editions are identical except for what they've named one of the chapters. Either edition is appropriate.



Prerequisite: C- or better in Math 1320 (or a higher math)

Calculator: Required (nothing fancy, just needs a square root function)

Blackboard is used for this course.

**Course Description**

This course provides a basic understanding of the statistics used most commonly by social scientists. Topics to be covered include summarizing data with graphs and numbers, generalizing from samples to a population, and determining the effect of one variable on another. The course will also allow you to understand research reports in social science publications and in the press. We will particularly emphasize the application of statistics, or using and interpreting the statistics (rather than the mathematical proofs underlying these statistical methods). Even students who say they have “math anxiety” can excel in this class, if they are willing to keep up with the work. By the end of this class, you should be able to:

1. summarize and organize data,
2. select and calculate an appropriate statistic to decide whether a variable reliably affects another variable, or whether such findings are driven by chance,
3. critically evaluate research findings in scientific journals and in the media,
4. work with a statistical software program (SPSS), and
5. possess a basic understanding of statistics that can be built upon in future research design and statistics classes.

## **Course Requirements**

### **Exams**

There will be 3 regular exams during the semester plus 1 final exam. Each of the regular exams is worth 100 points and the final exam is worth 150 points. The exams consist of a combination of multiple-choice, calculation, and essay-style questions. Each of the regular exams will cover information presented in class and on assigned readings *since* the previous exam—that is, the regular exams are non-cumulative. The bulk of the final exam is also non-cumulative, with exception of a 50-point section where you will identify what type of statistical test discussed during the semester would be used for particular examples (I will say more about this later). You must bring a photo ID, pencil, and calculator to each exam. Exams should not be missed, but exams will be rescheduled if the student has a legitimate, university-sanctioned reason for missing the exam. If you can anticipate that you must miss an exam (e.g., for a participatory athletic event, religious holiday), contact me (J. Sullivan) via email at least *one week prior* to the exam. If you are unable to take an examination on time due to illness or emergency, notify me *before* the examination is scheduled to begin by sending me an email. If your excuse is approved, be prepared to take the make-up exam at the earliest possible date (to be taken at the Field House Testing Center on the Main Campus). If you do not follow these procedures exactly, you will not be permitted to make up the exam. I only allow late exams in cases that are 1. Approved by the university and 2. Discussed with me before the test date.

### **Homework Assignments**

Homework is essential for success in this course. The assignments will solidify your understanding of course material. There will be 10 homework assignments worth 10 points each. Assignments will be posted on the course website 1 week prior to the listed due date. You will print them yourselves and turn them in to us in class. I (or the TA) will collect assignments right at the beginning of class (first 2-3 minutes) on each due date. If you anticipate missing a homework assignment, notify me via email at least *one week prior* to the assignment's due date. If you are ill or have an emergency on a day that a homework assignment is due, you must notify me *before* class and be prepared to hand in your assignment as soon as is possible. If you did not hand the assignment in on time and did not contact me in advance with your excuse (as noted above), assignments will receive 2.5 points off for each class period handed in late (thus,

if handed in 1 week late, the assignment would be worth 5 points; if handed in 2 weeks late or more, the assignment would be worth 0 points).

### **Grading Policy**

You earn points in the class as follows:

<b>Assignment</b>	<b>Possible Points</b>
3 Regular Exams - 100 points each	300 points
1 Final Exam – 150 points	150 points
10 Homework Assignments - 10 points each	100 points
<b>Total</b>	<b>550 points</b>

### **Letter Grades**

A	93+% ≥ 512 points	C	73-76%	402-423
A-	90-92% 495-511	C-	70-72%	385-401
B+	87-89% 479-494	D+	67-69%	369-384
B	83-86% 457-478	D	63-66%	347-368
B-	80-82% 440-456	D-	60-62%	330-346
C+	77-79% 424-439	F	< 60%	≤ 329

\*Grades are earned, not given. I will not round grades.

### **Class Policies**

- My number one policy is that I will answer any questions you have, unless the answer is in this syllabus. Email me or ask in class if you're unsure about something.
- No cell phones or other electronic devices (except calculator). Please turn them off or you will be asked to leave.
- Arrive on time and do not leave early.
- The computers on your desks are to remain off unless we are working on an in-class exercise that requires the use of computers (e.g., SPSS).
- Do not talk in class unless it is part of an assignment (or asking the instructor questions).

### **Academic Integrity:**

Please don't cheat. Individual assignments should reflect your own work, although it can often be helpful to discuss readings with other students. If you cheat, plagiarize, or falsify any requirements for this course, you will receive 0 points for the assignment on your first offense. Plagiarism includes using a quote from an online source and NOT citing it. If you're using words from someone else, they should be cited. If you cheat or plagiarize a second time, you will be reported to the University and receive an F in the course. Read UT's policy on academic integrity for further information. All policies listed on their Academic Dishonesty Policy Statement are to be adhered to in this course.

<http://www.utoledo.edu/dl/students/dishonesty.html>

### **Students with Disabilities**

Reasonable accommodations will be made for anyone with a disability that may require some modification of seating, testing, or other class requirements. Students must contact the Office of Accommodations (Rocket Hall 1820) for an evaluation and a form specifying what course accommodations are judged reasonable for that student. Please contact the instructor after class or during office hours so that appropriate arrangements may be made.

The contact information for the Office of Accommodations is as follows:

Campus Address: Rocket Hall 1820, Mail Stop #342

Phone Number: 419.530.4981

Web: <http://www.utoledo.edu/utlc/accessibility/>

### **How to Succeed in this Course**

I have seen first-hand that many students dread this statistics requirement. Many wonder why a statistics class is necessary for psychology majors. Others think back to math courses with considerable anxiety. I want you to know that I am aware that many students are nervous about this class and, above all, I want to help you succeed in this course. Moreover, I will do my best throughout the semester to convince you that it is quite natural for psychology and statistics to exist together.

Mastering the basics of statistics is much like learning a new language – it requires practice, practice, practice. New material builds on older material, and it is essential that you stay up on the class material. Here are some general strategies to consider when going through the course:

#### **Attend Class**

Attending class is critical for success in this course. In fact, research has shown that one of the best predictors of grades in courses is class attendance, and even the brightest students gain more insight by attending classes regularly. This is especially important in a class like statistics, as it is helpful to consume information multiple times and in a number of different formats (e.g., reading, lectures). Moreover, there will be some course material presented in class that does not appear in the book; thus, you will need to attend to get all the information covered on exams. I also do not share my powerpoint or notes with students. You will need to ask another student in class for notes.

#### **Read, Study, and Take Notes Actively**

Research shows that many individuals read and write passively, that is, without thinking about the meaning of what they are covering. In reading and studying textbook-type material, everyone (professors included) must read actively and as a result somewhat slowly. Research shows that learning is much more effective if new information is related to old information. Passively writing down what is on the overhead screen or what is discussed in class without thinking about it will not help you learn or understand the material.

Study the Summaries and Section Headings Before and While You Read  
 Summaries and headings help you mentally organize what you read. The authors did not just throw a bunch of information together randomly; they present an organized framework of ideas and information. You should seek to discover and understand their organization. Research shows that information is learned best when it is part of an organized mental framework.

Alter Your Expectations for Studying

Research consistently shows that students greatly underestimate the effort and time it takes to do a quality job of learning the new and complex material that is part of most courses. Academic experts generally agree that for a typical three-credit semester-long course, spending at least 6 hours per week outside of class working on learning is the norm for reasonable achievement.

Do the Homework Assignments

In order to facilitate your mastery of basic statistics, I have included homework assignments (in addition to the 4 exams). The purpose of the assignments is two-fold: 1) they allow you more opportunities to earn points in the course, and 2) they will give you critical practice for building your understanding of the material for exams and facilitate your use/retention of the information.

Keep up with Class Material and Ask Questions

There is a large amount of information to learn in this course, and most of the new material builds upon previously-learned material. Therefore, if you fall behind in the readings or don't understand a key concept, this will severely hurt your progress in the course. So keep up with the readings and ask questions when things are unclear! I can't help you unless I know there is a problem, so PLEASE come to us early rather than after you get a failing grade.

**Tentative Course Schedule**  
**(Subject to change based on in-class announcements)**

<b>Week</b>	<b>Date</b>	<b>Topic</b>	<b>Reading</b>	<b>Assignment</b>
1	Jan.10	Introduction: Science and Statistics	Module 1	
	Jan.12	Variables and Measurement	Module 2	
2	Jan. 17	Data Organization	Module 3	Assignment 1 due
	Jan. 19	Data Organization		
3	Jan. 24	Measures of Central Tendency	Module 4	
	Jan. 26	Measures of Variation	Module 5	Assignment 2 due

4	Jan. 31	Measures of Variation		
	Feb. 2	Standardized (Z) Scores	Module 6	Assignment 3 due
5	Feb. 7	Standardized (Z) Scores		
	Feb. 9	<b>Exam # 1 (Modules 1-6)</b>		
6	Feb. 14	Sampling & Distributions	Module 7	
	Feb. 16	Sampling & Distributions		
7	Feb. 21	Hypothesis Testing Basics	Module 8	Assignment 4 due
	Feb. 23	Single-sample z-tests	Module 9	
8	Feb. 28	t-statistic and Single-sample t-tests	Module 10	Assignment 5 due
	Mar. 2	t-statistic and Single-sample t-tests		
9	Mar. 7	No Class (Spring Break)		
	Mar. 9	No Class (Spring Break)		
10	Mar. 14	Independent Groups t-tests	Module 11	Assignment 6 due
	Mar. 16	Correlated Groups t-tests	Module 12	
11	Mar. 21	<b>Exam # 2 (Modules 7-12)</b>		
	Mar. 23	Analysis of Variance (ANOVA)	Modules 13-14	
12	Mar. 28	Analysis of Variance (ANOVA)		
	Mar. 30	RM and Two-Factor ANOVA	Modules 15-17	Assignment 7 due
13	Apr. 4	RM and Two-Factor ANOVA		Assignment 8 due
	Apr. 6	<b>Exam # 3 (Modules 13-17)</b>		
14	Apr. 11	Correlation	Modules 18-19	
	Apr. 13	Correlation & Regression	Module 20	
15	Apr. 18	Chi-square	Module 21	Assignment 9 due
	Apr. 20	Chi Square		Assignment 10 due
16	Apr. 25	Choosing the Right Statistic		
	Apr. 27	Make-up Date (if necessary)		

**FINALS WEEK: Exam #4 (Modules 18-21); Wednesday, May 3 8-10am**