

**Psychology 270**  
**Statistical Methods in Psychology**

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Classroom and time: **LS 132 TTH 8:00-9:15 A.M.**

Office hours: **TTH 9:30-10:30 A.M. by appointment**

Text: **Moore, Davis, S. The Basic Practice of Statistics** (Fourth Edition).

**Course Description:** This course is designed to introduce you to the field of statistics, and will be tailored toward research in the field of psychology. Statistics can be an intimidating subject matter, but it is certainly attainable with effort. You will be greatly helped in this course by completing readings *prior to lectures*, attending class, asking questions, using office hours, et cetera. This is an introductory course that will cover the basics of statistical methodologies most relevant to research in the field of psychology. In general, greater emphasis will be placed on conceptual frameworks, but mathematical foundations will also be covered. This approach should complement the practical application of statistical techniques to be introduced in the PSY 271 course. Statistics are used more often than you might think in daily life, and as such examples will often take the form of real-world examples.

**Examinations:** There will be three exams. The first two exams will focus on the sections of the book covered directly prior to examination. The final exam will be comprehensive. Exams will consist of definitions, true/false, multiple choice, matching, short answers, and free-answer problems. The subject matter for these exams will be drawn primarily from the book, but there may be additional information from lecture that is not included in the book. Exams will be closed-book but formulas will be provided and simple scientific calculators will be allowed. Each exam will be preceded by a minimum of one class meeting to be used specifically for review of exam topics – take advantage of this opportunity to ask questions!

Make-up exams will be given only in the case of emergency and **only when notification is given prior to the scheduled exam**. If you miss an exam without giving notice ahead of time, you will receive a grade of zero for that exam.

**Grading:** The grade for this course comes from 3 exams and your weekly assignments as follows:

**Assignments:** 10%  
**Exam 1:** 25%  
**Exam 2:** 25%  
**Final Exam:** 40%

Homework and assignments will be collected, and grades assigned based on completion as follows:

$\sqrt{+}$  = 100%  
 $\sqrt{\quad}$  = 50%  
**X** = 0%

The answers for assignments and homeworks will be reviewed when they are handed back to the class.

There is no extra credit for this course. Attendance will not be recorded, however, the nature of this material is cumulative and it is **highly recommended that you attend every class meeting**. Lack of attendance *will* be reflected in your grade, and some assignments may be completed in class.

Again, readings should be completed prior to lecture on a given topic. I highly recommend that you read the examples and use the problems presented throughout the chapter to apply the knowledge as you are learning it – this will help you immensely with grasping the concepts in their more abstract form. Also, any of these problems that present you with difficulties can be reviewed prior to exams during designated review sessions. Quizzes for each chapter are also included on the CD-Rom at the back of your book, or they can be accessed online at <http://bcs.whfreeman.com/bps4e/>.

**Communication:** I am easiest to contact via email. I check it often no matter where I am. I have made my phone number available, but please use it only in the case of emergencies. Otherwise, I am always available during scheduled office hours. If you can't make those hours, contact me and we can schedule an appointment. I plan to use Blackboard to communicate news, scheduling changes, et cetera.

**Other Notes:** The mathematics used in this course is not going to be overwhelming, so don't be intimidated. Because we live in the digital age, statistical software does a lot of the calculating for us (as you will see in PSY 271). Basic math operations will be used.

More complicated than the math will be the logic behind the formulas you will see, and the concepts that they represent. The statistical concepts we will cover are going to increase in complexity, and they will be cumulative (i.e. later material will build on earlier material). If you miss a substantial amount of class and/or fall behind on the readings, it will be difficult for you to keep up with this cumulative nature of the material. Lectures will reinforce concepts introduced in the readings and build on them with examples and discussion. Be aware that powerpoint slides will not be posted or handed out, so befriend those around you to acquire notes from the days you miss.

## CLASS SCHEDULE

WEEK	DATE	TOPIC	READING
1	1/22	Introduction & Syllabus	CHAPTER 1
	1/24	Graphing Distributions	
2	1/29	Descriptive Statistics	CHAPTER 2
	1/31		
3	2/5	The Normal Distribution	CHAPTER 3
	2/7		
4	2/12	Correlation	CHAPTER 4
	2/14		
5	2/19	Simple Linear Regression	CHAPTER 5
	2/21		
6	2/26	REVIEW	
	2/28	EXAM 1	
7	3/4	Producing Data: Sampling & Designing Experiments	CHAPTERS 8 & 9
	3/6		
8	3/11	Confidence Intervals	CHAPTERS 14 & 15
	3/13	Generating Hypotheses & Tests of Significance	
9	3/18	One-Sample T-test	CHAPTER 18
	3/20		
10	3/25	REVIEW	
	3/27	EXAM 2	
11	4/1 4/3	SPRING BREAK – NO CLASS	
12	4/8	Two-Sample T-test	CHAPTER 19
	4/10		
13	4/15	One-Way Analysis of Variance	CHAPTER 25
	4/17		
14	4/22	Inference in Practice	CHAPTER 16
	4/24		
15	4/29	REVIEW	
	5/1	REVIEW	
16	5/6	FINAL EXAM (Comprehensive – Part 1)	
	5/8	FINAL EXAM (Comprehensive – Part 2)	