

# Mathematics 160, Section 3

## Basic Statistics

Fall 2008

**Overview.** Statistics is the field of study involving (1) the collection, summarization, and analysis of data; and (2) the drawing of inferences about a population from the examination of a sample of the population. The goals of this course are to introduce each student to the practice of statistics and to prepare each student using statistics in future work in their own field.

**Instructor.** Benjamin Pittman-Polletta  
Office: Math 714  
Phone: 520-203-3185  
E-mail: [benpolletta@math.arizona.edu](mailto:benpolletta@math.arizona.edu)  
Home Page: [math.arizona.edu/~benpolletta](http://math.arizona.edu/~benpolletta)  
Course Web Page: [math.arizona.edu/~stats](http://math.arizona.edu/~stats)

**Office Hours.** Monday 1-1:50  
Wednesday 3:30-4:20

**Statistics Tutoring.** Statistics instructors in the Mathematics Department will provide statistics tutoring in the Math East Building, Room 145. The complete schedule will be posted on the course webpage

**Class Meetings.** The class meets each Monday, Wednesday, and Friday from 2 to 2:50 in Psychology 206.

**Textbooks.** *The Basic Practice of Statistics*, 4th Edition, by David S. Moore is required

**Calculators.** Each student is required to have, and to know how to use, a graphing calculator that can do the statistical calculations correlation and linear regression. Some examination questions will require the use of such calculators. No calculator swapping will be permitted during exams. In the classroom, the Texas Instruments TI-83/84 will be used.

**Class Attendance.** Attendance will not be factored into your grade. However, I expect every student to attend every day of class, on time. Students are responsible for all information provided in class and on the course web page. *If you are more than fifteen minutes late to class, don't bother showing up.* Except for emergencies, no student is allowed to leave the classroom before the end of the period. Any student who is excused from class for attendance at an officially authorized event must provide a written excuse signed by the Dean of Students no later than one week after the absence. *Students with more than 2 absences may be administratively dropped from the class.*

**Classroom Conduct.** Read the relevant sections of the textbook before coming to class. *No outside reading or conversations will be permitted during class time*; if you feel that your conversation or reading is more important than what the class is doing, don't come to class. *Turn off all cell phones during class*. If you have a question about what is going on in class, please ask me, not your neighbors. *If your question is not about class, save it until class is over*.

**Examinations.** Three midterm examinations will be given during the weeks indicated in the *Course Schedule*, and a final examination will be given on **Friday, December 12, from 2 PM to 4**. Unless there are extenuating circumstances, *a missed midterm examination or a missed final examination will result in a score of zero for that work*. If a student earns a higher percentage on the final examination than on one of the midterms, then the student's lowest midterm score will be replaced by the percent scored on the final examination.

**Homework/Quizzes.** In order to learn statistics, you must practice it by working with data. Both quizzes and homework give the instructor and the student feedback about their understanding of the material and their performance in the class. *Homework and quizzes will comprise approximately 14 percent of your grade in this class*.

Homework will be assigned regularly. Read the relevant sections of the textbook and try your best to answer each question. *I will answer questions about the homework only during the class period before the class period on which it is due*. Homework must be handed in at the beginning of class. Quizzes will be given regularly, may be announced or unannounced, and may be given at any time during the class period.

Selected problems from the homework will be graded; each problem graded will be worth a total of 3 points. In order to receive full marks for a problem, the correct answer and all intermediate steps must be shown. Each quiz question will also be worth a total of 3 points. Your homework and quiz grade will be calculated using the following formula, up to a maximum of 100 points:

$$\frac{(\text{Your total score for all homework and quizzes})}{(\text{Total points for homework and quizzes} - 10\% \text{ of the total points})} * 100$$

Your homework should be written neatly or typed on loose leaf paper *do not rip paper out of a spiral notebook*. If there are multiple sheets, *staple* them together. Write both your name and the textbook section number on each page of your homework, answer questions in order, and write down the question number of each problem before you answer it. *Graphs must be printed or drawn on graph paper*, and all questions *must be answered in full sentences*. Failure to comply with these rules will result in a loss of points. *Illegible problems will not be graded*.

*Late homework will not be accepted under any circumstances, and makeup quizzes will not be given*. If you know that you will be absent from class, you must hand the homework in early to receive credit.

**Minitab.** Minitab assignments will be assigned and collected on a regular basis. Solutions must be computer-generated with each exercise clearly labeled. The student's name, course number, and section number must be given at the top of the first page, and assignments consisting of multiple pages must be *stapled*. No credit will be given for assignments that contain only answers with no supporting work. *Late assignments will not be accepted*.

**Course Grades.** Midterm examinations will be worth 300 points, and the final examination will be worth 200 points. Homework/quizzes will be worth 100 points, Minitab assignments will be worth 100 points. The ALEKS exam will be worth 100 points. At the end of the Semester, grades will be assigned based on the following scale:

Total Points	Grade
639-710	A
568-638	B
497-567	C
426-496	D
0-425	E

*All electronic devices, particularly cell phones, must be turned off during all exams. Silent and vibration modes are not allowed. The University's Exam regulations for final exam week will be strictly followed, in particular those regarding students with multiple exams on a single day. Now is the time to find out if you have a problem with multiple exams on a single day at the end of the semester.*

**Dropping The Course.** The last day to drop without a signature is Friday, September 19, and the last day to drop with a grade of "W" (if passing) is Friday, October 17.

**Incomplete Grades.** If a student fails to complete the course due to circumstances unforeseen, then he or she may qualify for a grade of I, "incomplete" if **all** of the conditions are met:

1. The student has completed all but a small portion of the required work.
2. The student has scored at least 50% on all work completed.
3. The student has a valid reason for not completing the course on time.
4. The student agrees to make up the material in a short period of time.
5. The student asks for the incomplete before grades are due - 48 hours after the final exam.

**University Policies.** Students are expected to be familiar with and abide by the University of Arizona's Code of Academic Integrity, Student Code of Conduct, and Official Student Email Policy. These policies will be strictly enforced, and any student found to be in violation will be appropriately sanctioned.

**Students with Disabilities** If you anticipate issues related to the format or requirements of this course, please meet with your instructor to discuss ways to ensure your full participation in the course. If you determine that formal disability-related accommodations are necessary, it is very important that you be registered with Disability Resources (621-3268; drc.arizona.edu). You should notify your instructor of your eligibility for accommodations by Friday, August 29, 2008. You and your instructor can then plan how to coordinate your accommodations.

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### Tentative Course Schedule

The following is a *tentative* Course Schedule. The chapters refer to *The Basic Practice of Statistics*, 4th Edition.

Week	Dates	Chap.	Topics	Notes
1	8/25-8/29	1	Introduction & Distributions	
2	9/1-9/5	2 4	Distributions Scatterplots and Correlation	Labor Day(9/1)
3	9/8-9/12	5	Least-Squares Regression	
4	9/15-9/19	6	Two-Way Tables	Exam I/Last Free Drop Day(9/19)
5	9/22-9/26	8-9	Producing Data	
6	9/29-10/3	10,12	Probability	
7	10/6-10/10		Discrete Random Variables	
8	10/13-10/17	13	The Binomial Distributions	Exam II/Last Day to Drop with "W"(10/17)
9	10/20-10/24	3	Continuous Random Variables The Normal Distributions	
10	10/27-10/31	11	Sampling Distributions	
11	11/3-11/7	14	Confidence Intervals	
12	11/10-11/14	15-16	Tests of Significance	Veterans Day(11/11)
13	11/17-11/21	18-19	Quantitative Response Variables	Exam III
14	11/24-11/26	20-21	Categorical Response Variables	Thanksgiving recess(11/27-11/30)
15	12/1-12/5	23	The Chi-Square Test	
16	12/8-12/10		Review	