Syllabus for: Math 15 Elementary Statistics

Semester & Year:	Fall 2015
Course ID and Section Number:	Math 15 E7009
Number of Credits/Units:	4
Day/Time:	MWF
Location:	SC208
Instructor's Name:	Chris Panza
Contact Information:	Office location and hours: 216G TTh 1:00 – 2:00pm Phone: 476-4351 Email: chris.panza.cr@gmail.com

Course Description (catalog description as described in course outline):

The study of statistical methods as applied to descriptive statistics and inferential statistics. An emphasis on the meaning and use of statistical significance will be central to the course. Students will use frequency distributions, graphs, measures of relative standing, measures of central tendency, measures of variability, correlation, and linear regression to explore descriptive statistics. Students will use the laws of probability and statistical tests (t-tests, chi-square, ANOVA, and regression analysis) to make decisions via hypothesis testing and estimate parameters using confidence intervals.

Student Learning Outcomes (as described in course outline) :

- Accurately communicate statistical ideas using correct statistical notation, graphs, and vocabulary.
- Use descriptive and inferential statistics to solve real-world problems.
- Demonstrate appropriate use of technology in making decisions based upon real-world data.
- Read and interpret information that contains statistical analysis and be able to communicate these results.

Judge the validity of research reported in the mass media and peer reviewed journals.

Special accommodations: College of the Redwoods complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS.

Academic Misconduct: Cheating, plagiarism, collusion, abuse of resource materials, computer misuse, fabrication or falsification, multiple submissions, complicity in academic misconduct, and/ or bearing false witness will not be tolerated. Violations will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods. Students caught plagiarizing or cheating on exams will receive an "F" in the course. The student code of conduct is available on the College of the Redwoods website at: http://redwoods.edu/District/Board/New/Chapter5/AP%205500%20Conduct%20Code%20final%2002-07-2012.pdf Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the college catalog and on the College of the Redwoods homepage.
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MATH 15 – Elementary Statistics

E7009 • Spring 2015

SC 208 • MWF • 10:05am – 11:20am

Instructor: Chris Panza
Email: chris.panza.cr@gmail.com
Website: http://msemac.redwoods.edu/~cpanza/
Office: SC 216G
Office Hours: TTh 1:00pm – 2:00pm

Cell Phones

Cell phones are a nuisance and distraction for you, me, and your fellow students. Keep them on silent (or off) and put away for the duration of class. The use of cell phones during class is prohibited.

Prerequisite

Math 120 with a grade of C or better or appropriate score on the assessment test.

Course Objectives

- Accurately communicate statistical ideas using correct statistical notation, graphs, and vocabulary.
- Use descriptive and inferential statistics to solve real-world problems.
- Demonstrate appropriate use of technology in making decisions based upon real-world data.
- Read and interpret information that contains statistical analysis and be able to communicate these results.
- Judge the validity of research reported in the mass media and peer reviewed journals.

Textbook

Interactive Statistics, 3rd Ed. by Aliaga and Gunderson

Calculators

You are required to have a graphing calculator for this course. I recommend a TI-83 or TI-84. I will be using a TI-84 in class. Calculators are available for rent from the math department for $20/semester; pay at the cashiers office and pick it up from Betsy Buchanan in the ASC. Also, check local pawn shops, Craigslist, Ebay, etc. Cell phones are not allowed to be used as a calculator.

Grading

Homework	25%	90 – 100%	A
Quizzes	30%	80 – 89%	B
Exams	35%	70 – 79%	C
Project	10%	60 – 69%	D
		Below 60%	F

I will assign +/− grades. I always round UP to the nearest whole percent.

Homework

All homework is a worthwhile investment. Submit your papers in a neat and orderly fashion following the format I present in class. Sloppy homework is unacceptable. You are encouraged to work together on your homework assignments. Each assignment will be worth 10 points. Homework will not be accepted late except for a valid reason (e.g. sick, family emergency, etc.). At the end of the semester the two lowest homework scores will be droped from your grade. I will be posting solutions online.

Please staple each individual assignment separately in the upper left corner and include your full name, class, homework number, and instructors name in the upper right hand corner. Use only pencil and be sure all

problems are neat and readable, even if you must rewrite it. Be sure to give your answer sufficient context (i.e. a complete sentence) and label all numbers; a number by itself means nothing. Include space between problems. Always show equality where appropriate and clearly indicate your answers. All graphs should be drawn carefully and neatly with a straight-edge, labeling the axes and all points of interest.

Be neat, neat, neat. Here's an example of layout:

Ima Student
Math 15
HW 7
Panza

HW 7: 15, 21, 34

7.15 (a) The value of 4 represents the number of students who take the course as an elective and rate the course as being a poor one.

(b) The conditional distribution of course rating given the reason is:

		RATING		
		Poor	**Good**	**Excellent**
REASON	**Required**	22.86%	54.28%	22.86%
	Elective	13.33%	33.33%	53.33%

(c) Students who take the course as an elective tend to rate the course higher than students who take the course as a requirement.

7.21 (a) Frequency Plot for the number of squares for the 20 rats in the experiment.

					X					
				X	X	X	X			
		X		X	X	X	X			
X	X	X	X	X	X	X	X	X	X	
2	3	4	5	6	7	8	9	10	11	# of Squares

(b) The number of squares ranged from 2 up to 11, with most of the rats having values between 6 and 9.

7.34 (a) Fifteen shoes produced by Plant A were priced at \$40 or higher.

(b) The distribution of shoe prices for Plant A is (i) symmetric and (ii) unimodal.

(c) The distribution of shoe prices for Plant B is (i) symmetric and (iii) bimodal.

(d) i. The direction of extreme is two-sided.

ii. The p-value corresponding to the observed price of \$55 is (2+2)/20 = 0.20

iii. At the 5% level, the decision is to fail to reject H_0.

Quizzes

There will be several quizzes throughout the semester. These quizzes will include material covered in the class and the textbook. Each quiz will be worth 10 points. At the end of the semester the two lowest quiz scores will be dropped from your grade. There are no make-up quizzes and no extra time is allowed; a missed quiz will count as one of your lowest scores and will be dropped.

Exams
There will be three Exams. All exams are closed book and individual. Bring sharp pencils and a calculator. Remove all books and binders, etc. from your desk. Always clearly rewrite all applicable steps in the space provided on the exam; never refer to scratch paper or backs of pages. There are NO make-ups. In case of a severe conflict, arrangements can be made to take an exam early.

Project
There will be a short project using statistical analysis methods learned in class on a data set I will provide to you. More information to come.

Important Note: Anything not done in pencil will not be graded!

Attendance
Attendance is very important to your overall understanding of the concepts presented in this course. You should attend all class sessions, arriving on time and leaving after the class has ended. I encourage participation and welcome all questions. If you must miss a class session, check with a classmate to find out what material you missed and please contact me to keep up to speed.

Cheating
Cheating is a very serious offense and is dealt with in a serious way. You will be reported and it will go on your record. Don't do it.

Assistance
If you have a documented disability or believe you could benefit from any of the services offered by Disabled Student Programs & Services (DSP&S), please contact the DSP&S office (Building T20, behind the Bookstore) at 476-4280.

Tutoring
I encourage you all to enroll in MATH 15L for 1/2 or 1 unit of credit to obtain supplementary help. It is a Credit/No Credit course that will not affect your GPA, but is counted among the 12 unit minimum for financial aid. You must complete a required number of hours and a set of online assigments. Alternatively, you can register for the non-credit Math 252 at no cost, by instructor or advisor referral.

Other
Please turn off and remove all portable audio systems before entering class. Please be respectful of your fellow classmates; refrain from using foul, crude, or disrespectful language in the classroom. This syllabus can be changed by me at any time.