Syllabus for: Math 15 Elementary Statistics

Semester & Year:	Spring 2015
Course ID and Section Number:	Math 15 – E7011
Number of Credits/Units:	4
Day/Time: Location:	MW 6:05-8:10 in SC 208
Instructor's Name:	Michelle Moreno
Contact Information:	Email: moreno.cr.math@gmail.com, michelle-moreno@redwoods.edu

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) :

1. Accurately communicate statistical ideas using correct statistical notation, graphs, and vocabulary.
2. Use descriptive and inferential statistics to solve real-world problems.
3. Demonstrate appropriate use of technology in making decisions based upon real-world data.
4. Read and interpret information that contains statistical analysis and be able to communicate these results.
5. 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://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf

College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.

Math 15 E7011 - Spring 2015
Syllabus

Instructor: Michelle Moreno
Email: moreno.cr.math@gmail.com
Time & Location: MW 6:05-8:10 in SC 208

Prerequisite: Math 120 or Math 194 (Intermediate Algebra) with a grade of C or better, or satisfactory performance on math placement exam.

Recommended Preparation: English 150

Required Materials: *Interactive Statistics*, 3ed. by Aliaga & Gunderson
ISBN: 0-13-149756-1

TI-84 (or TI-83) Calculator. No other calculator will be supported by the instructor.

Course Objectives: This is an introductory course to the science of statistics. Statistics is about making sense out of data. At the most basic level statistics is how to organize data. At the other end of the spectrum is inferential statistics where you make decisions/ inferences based upon the data. There are two primary goals for this course:

1. Properly collect and analyze a set of data.
2. Critically examine statistical information presented both in the media and in peer-reviewed journals.

At the end of this course students should be able to:

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

The 5 items listed above are known as the **STUDENT LEARNING OUTCOMES** for this course. More detail is provided at: http://msenux.redwoods.edu/mathdept/outlines/current/math15.php

Course Structure: This section of Math 15 will meet two days a week, MW 6:05-8:10 PM in SC 208 for 15 weeks, Jan 21 – Wednesday May 6 with a **final** examination on **Monday May 11 at 5:30-7:30pm**. Each week you will be required to do the following:

1. **Attend class**. Be ready to listen and work. Your participation is required!
2. **Read the assigned sections of the text**. Reading the text will reinforce what you will learn in lecture. Take notes as you read. While this is a good, solid textbook it is not a good reference book. It will be necessary for you to keep good, organized notes, including definitions, formulas, and tips for calculations and running tests using your calculator.
3. **Complete homework assignments by the due date**. Homework due dates will be announced in class. Being absent is not an excuse for ignorance. Do not just copy answers from the back of the book. It is very obvious when this is done and it will result in you not learning the material, i.e., you will not pass the quizzes and exams.
4. **Be prepared to take a short quiz each week**. Quizzes are designed to tap into your critical thinking skills. You may be required to combine concepts.
5. **Participate** in the classroom discussions and/or activities.

Essay Exams: You will have two take-home exams and will have several weeks to complete each one.

> Exam 1: Analysis of the book, *How to Lie With Statistics*, by Darrel Huff. You may purchase a hard copy of this book on Amazon for about $6. There is also an online version provided to you in MyCR along with details of the assignment. Due Date: **Wednesday Feb. 18.**
>
> Exam 2: Data collection and analysis project. You have the opportunity to design your own research project, collect data, and analyze that data. Details are available in MyCR. Due Date: **Wednesday May 6.**

Final Exam**:** The final exam is mandatory and will **only** be given on **Wednesday May 11 at 5:30-7:30pm**. Failure to take the final exam will result in a non-passing grade, regardless of the number of points earned during the semester. Exam questions are in MyCR.

Grading:
Your overall grade will be weighted as follows:

Homework	10%	A	93-100%
Quizzes	10%	A-	90-92.9%
Participation	15%	B+	87-89.9%
Essay Exam #2	20%	B	83-86.9%
Essay Exam #3	20%	B-	80-82.9%
Final	25%	C+	77-79.9%
		C	70-76.9%
		D	60-69.9%
		F	< 60%

Rounding up to the next grade will be considered for each student and the decision will be based on effort, attitude, and attendance.

Time**:** Like all math classes, this class will require a great deal of your time. Make sure that you stay organized, make a schedule, and stick to the deadlines.

Classroom Conduct**:** It is imperative that the instructor and each student are treated with respect. Students should feel free to ask questions without being ridiculed. **Anyone displaying inappropriate language and/or attitude, mistreating the instructor or a classmate will receive an F for this course**, regardless of how many points you have accumulated. **Respect each other!**

Faculty Initiated Drop:

1. Students missing the first day of class, **Wednesday January 21, 2015 <u>WILL</u>** be dropped that day.

2. Students displaying poor attendance/performance during the first two weeks of the term **<u>MAY</u>** be dropped on **February 2**. If your intention is to drop you should do so - do not expect me to do it for you.

3. It is the policy of the College of the Redwoods Math Department to exercise a "Faculty Withdrawal" for any student who has missed more than 15% of the class meeting time (prior to the drop deadline of **April 3**), due to the severely diminished likelihood of a successful outcome in the course. Again, I may or may not exercise this option and so if your intention is to withdraw from the course you should do so yourself - do not expect me to do it for you.

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://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf

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.

School holidays (no class):
Jan. 19, Feb. 16, Mar. 16-21