Syllabus for: Math15 Elementary Statistics	
Semester & Year:	Fall 2014
Course ID and Section Number:	Math 15-E6112
Number of Credits/Units:	4.0
Day/Time: **Location:**	TThF 8:30 – 9:45am SCSC 208
Instructor's Name:	Dr. Ken Owens
Contact Information:	Office location and hours: SCSC 208 TThF 8:00-8:30am Phone:707-826-4249 Email:ken-owens@redwoods.edu

Course Description : 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 a result of taking this course, the student be able to do

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 accommodations document to me as promptly as possible so that necessary arrangements can 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.

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.

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.

MATHEMATICS 15: Elementary Statistics, Fall 2014

Instructor: Dr. Ken Owens
Office Hours: SCSC 206 TThF 8:00-8:30 am and by appointment
Email: ken-owens@redwoods.edu

TEXTBOOK: *Interactive Statistics*, 3rd Edition, by Aliaga & Gunderson. Published by Prentice Hall. 2006. Either the standard wire-bound version or the custom-published paperback version is fine.

STATISTICAL STUDY/REPORT: Each student is responsible for conducting their own statistical study and reporting the finding to the class in an oral presentation and to the instructor via a several page paper. The instructor will conduct several of these studies in class as examples.

TOPICS:

Chapter 1: How to Make Decisions with Statistics (pp 1-52, 62-66)
Chapter 2: Sampling Designs (pp 83-135)
Chapter 3: Observational Studies & Experiments (pp 145-196)
Chapter 4: Summarizing Data Graphically (pp 211-284)

Chapter 5: Summarizing Data Numerically (pp 299-333, 344-5)
Chapter 6: Using Models to Make Decisions (pp 357-397)
Chapter 8: Sampling Distributions (pp 499-545, 555-7)
Midterm Exam

Chapter 9: Making Decisions About Population Proportions (pp 563-594, 602-7)
Chapter 10: Making Decisions About Population Means (pp 613-33, 639-53, 657-8)
Chapter 11: Comparing Two Treatments (pp 669-727)
Chapter 12: Comparing Many Treatments (pp 743-761, 791-3)

Chapter 13: Regression Analysis (pp 807-901)
Chapter 14: Analysis of Count Data (pp 921-966)
Final Exam

STUDENT LEARNING OUTCOME: As a result of taking this course, the student will 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.

EXPECTATIONS: I expect that you come to class and participate, work hard on your homework assignments, do your best on exams. I expect everyone to treat each other with respect in our class. I expect that you use cell phones and computers appropriately and in a manner that does not disturb any fellow students or the instructor; this implies that at the very least there should not be any sound coming from your cell phone and you only utilize applications that have course content related material. Additionally, you should be on time to class and avoid leaving early in order to minimize disruption. The Student Code of Conduct addresses many issues that arise on a college campus and you should be aware of the agreement that you have made as an enrolled student.

MATERIALS: Besides the mentioned text, you will need to obtain the following for this class:
a) A TI-83+ or TI-84.
b) Graph paper.
c) A notebook to keep lecture notes and returned work in.
d) Lots of pencils and an eraser.

GRADING SYSTEM: Your course grade will be determined as follows:

Homework	25%
Midterm	25%
Statistical Report	25%
Final Exam	25%

GRADING EXCEPTION:
Anyone doing all the assignments, taking all the tests, showing steady improvement and getting an A on the final may get an A in the course even if other grades would otherwise prevent it. This exception applies only to students demonstrating exceptional effort all semester who get an A on the final as a result of their hard work. This exception is awarded only at the discretion of the instructor and his decision is final.