

| <b>Syllabus for: Math 15 Elementary Statistics</b>   |                                     |
|--|-------------------------------------|
| <b>Semester &amp; Year:</b>  | Fall 2013                           |
| <b>Course ID and Section Number:</b>   | Math 15 – E3855                     |
| <b>Number of Credits/Units:</b>  | 4                                   |
| <b>Day/Time:</b>   | TThF 11:40-12:55 in SC214           |
| <b>Location:</b>   |                                     |
| <b>Instructor's Name:</b>  | Michelle Moreno                     |
| <b>Contact Information:</b>  | Email: michelle-moreno@redwoods.edu |
| <b>Course Description (catalog description as described in course outline):</b>  |                                     |
| <p>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.</p>                   |                                     |
| <b>Student Learning Outcomes (as described in course outline) :</b>  |                                     |
| <ul style="list-style-type: none"> <li>• Accurately communicate statistical ideas using correct statistical notation, graphs, and vocabulary.</li> <li>• Use descriptive and inferential statistics to solve real-world problems.</li> <li>• Demonstrate appropriate use of technology in making decisions based upon real-world data.</li> <li>• Read and interpret information that contains statistical analysis and be able to communicate these results.</li> <li>• Judge the validity of research reported in the mass media and peer reviewed journals.</li> </ul>  |                                     |
| <b>Special accommodations:</b> 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. |                                     |
| <b>Academic Misconduct:</b> 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.   |                                     |
| <p>The student code of conduct is available on the College of the Redwoods website at: <a href="http://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf">http://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf</a></p>   |                                     |
| 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 - Elementary Statistics

Fall 2013

**Instructor:** Michelle Moreno

**E-mail:** [michelle-moreno@redwoods.edu](mailto:michelle-moreno@redwoods.edu)

**Website:** <http://msemac.redwoods.edu/~mmoreno>

**Time & Location:** TThF 11:40-12:55 SC214

**PREREQUISITE:** Math 120 (Intermediate Algebra) with a grade of "C" or better, or satisfactory performance on the math assessment exam.

**RECOMMENDED PREPARATION:** English 150 or higher.

## **MATERIALS:**

- **REQUIRED Textbook:** *Interactive Statistics* 3ed. by Aliaga/Gunderson ISBN: 0-13-149756-1
- **Optional Text:** *How to Lie With Statistics* by Darrell Huff ISBN: 0-39-331072-8
- **REQUIRED Calculator:** TI-83 or TI-84. No other calculator will be supported by the instructor, i.e., if you choose to use something else you are on your own.

**OBJECTIVE:** 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 three days a week, TThF 11:40-12:55 for 15 weeks, August 26- through December 6 with a **final examination on Tuesday December 10<sup>th</sup> from 10:45-12:45**. 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 quiz each week.** Quizzes are designed to tap into your critical thinking skills. You may be required to combine concepts. You must do the homework to be successful on the quizzes.
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 them. Details will be given in class and posted on myCR.

**FINAL EXAM:** The final exam is mandatory and will **only** be given on **Tuesday December 10<sup>th</sup> from 10:45-12:45**. Exam questions and details are available to you throughout the semester.

**GRADING:**

Your overall grade will be weighted as follows:

|               |     |
|---------------|-----|
| Homework      | 5%  |
| Quizzes       | 20% |
| Essay Exam #1 | 25% |
| Essay Exam #2 | 25% |
| Final         | 25% |

**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 DROP AFTER CENSUS:** 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), due to the severely diminished likelihood of a successful outcome in the course. It is important to note that, if it is the student's intention to withdraw from the course, the responsibility remains with the student to ensure the proper paperwork has been filed – that is, students are not to assume the instructor will file the "Withdrawal" automatically.

**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:  
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