Syllabus for: Elementary Statistics, Math 15

Semester & Year:	Summer 2014
Course ID and Section Number:	MATH-15-V5789
Number of Credits/Units:	4
Day/Time: **Location:**	Virtual via: MyCR Asynchronous course, due dates are posted in MyCR
Instructor's Name:	Michael Butler
Contact Information:	Online office hours: Scheduled by appointment using the Chat Room in Phone: 476-4234 (Please use email to contact me) Email: Michael-butler@redwoods.edu

Course Description:

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

Student Learning Outcomes:

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 mal accommodations for qualified students with disabilities. Please present your written accommodation request at before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjus made. If you have a disability or believe you might benefit from disability related services and may need accon

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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:

1. Accurately communicate statistical ideas using correct statistical notation, graphs, and vocabulary.
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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%202002-07-2012.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 ONLINE: ELEMENTARY STATISTICS, Summer 2014
INSTRUCTOR: Michael Butler
Office: PS 119A Eureka Campus
Voice: 476-4234 (message only)
email: michael-butler@redwoods.edu or use the Mailtool in MyCR

WEBSITE: MyCR

TEXT: Interactive Statistics 3ed. **Authors:** Aliaga/Gunderson ISBN: 0-13-149756-1 (you can find it used on the web for a reasonable price)

OBJECTIVE : This is an introductory course to the science of statistics. Statistics is all 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 exam

statistical information (presented in the media/journals) and decide if the conclusions are valid.

MATERIALS : Besides the mentioned text, you will need to obtain the following for this class:
a) A TI-84 graphing calculator (required)
b) A computer with access to the Internet, high-speed strongly recommended. The ability to watch video delivered from the Internet is a necessary part of course. You will need to be proficient with a computer and how to use the Internet.
c) An email account.
d) A word processing program such as Microsoft Word.
e) Some form of graphing software. The TI-84 will work just fine. You can capture images off of your calculator using your cell phone or if wish you can use the USB cable that came with your TI-84 and TI Connect software.
f) A composition book to keep cumulative course notes in.

CLASSROOM ENVIRONMENT: It is expected that everyone involved in this class, teachers and students alike, will act in a manner conducive to providing a comfortable environment for learning, a place where students feel free to ask and answer questions without fear of embarrassment or ridicule. It is important to stay on task. Hence, posts to MyCR that do not pertain to the subject at hand will be removed. If you have an issue with another student's posts, please direct those concerns to me. It is essential for student success to maintain a good environment in our virtual classroom. If you have any difficulties with the learning environment, please send an email with your phone number with a time to contact you. The official **Student Code of Conduct (AP5500)** can be read at:
http://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf

VIDEO LECTURES: There are a series of short videos that you are to access via MyCR. The videos are an essential part of the course and you are expected to watch them. The suggested method is to read the text until you reach an assigned Let's Do It (LDI) problem. At this point, refer to MyCR and select the correct video that covers the material you are about to work on. Watch the video and work through the Let's Do It problem. There are supplemental videos that cover key concepts that you should also watch. The videos are laid out in order and if you watch them in sequence, you'll be good to go. The videos needed for a homework set are listed in the assignment link. I also take requests. If there are examples or problems from the text you would like to see worked, post a request to the Forum in MyCR (and send a follow-up email) and I'll get a video response posted as soon as possible (usually within 48 hours).

HOMEWORK : The Assignments link in MyCR is where you will find the homework assignments It is preferred that you type your homework and submit your file as either an "rtf" (Rich Text Format) file or a pdf. You can also do your homework using paper and erasable pen (neatly!) and scan it in to submit to MyCR as a jpeg or a pdf. You are allowed to drop your lowest homework score from your final grade calculation. Homework is an essential part of this course and if you want to succeed, you need to make a commitment now to staying up with the homework. Please always put your name and assignment number on each assignment. There will be a fair amount of graphing in this course. You have the option of either doing your graphs with your calculator and creating a screen capture, use R (a free statistical package) or other software (some links to free software are available from the course site), or on graph paper using a straight edge. If you chose to do graphs by hand on graph paper, you may scan in your homework as a pdf or jpeg and submit it to MyCR. All homework will be submitted to your MyCR Drop Box. There is a course video going over these option and showing how to submit homework into MyCR.

WRITING ASSIGNMENTS: : There will be writing assignments assigned during the semester. Some of these assignments will ask you to read and evaluate (from a statistical point of view) an article from the mass media that references a peer-reviewed study (that used statistics). Some will ask you to read and analyze a peer reviewd journal article. The material from these assignments will come from currently published works.

COMPOSITION BOOK: You will be keeping a summary notebook during the course that you will find invaluable during the quizzes and exams. Please buy a comp book to keep summary notes in. The first 4 pages are your table of contents. You need to put page numbers in the book and keep track of the concepts that you are summarizing in the table of contents. Do not put Xeroxed material in the book, everything should be in your handwriting. The process of creating this resource is as valuable as the resource itself. Again, you'll find this extremely helpful for the chapter quizzes and the exams. You are allowed to use the book on all quizzes and the two exams (midterm and final). Full details on how the comp book works can be found in Course Documents.

QUIZZES/ACTIVITIES: There will be a short quiz each week taken via the MyCR Test & Quizzes link. You will get an email reminder that the quiz has been posted. The quizzes will generally be ten questions and should be pretty easy if you have been staying up with the homework and have been watching the videos. No make up quizzes are allowed without prior arrangements. You will be allowed to use your Composition Book during the quizzes. The quizzes are timed (20 minutes) and if you are trying to use the text or other resources for help, you will run out of time prior to completing the quiz. You are expected to adhere to the Student Code of Conduct when taking quizzes and exams.

EXAMS: There will be two exams in this course given using the MyCR Test & Quizzes system. You are expected to adhere to the student code of conduct when taking these exams. You will be allowed to use your Composition Book with the cumulative notes that you have been keeping there. You are not allowed to use your text or other websites during these exams. Since the exams are timed (one hour), you will not be able to complete them if you are using your text and other resources. It takes way to much time to shuffle through the text looking for help on a problem. Be sure and keep up with creating your cumulative notes in your Composition Book. Many former students report that this is an invaluable resource when they take an Intermediate Statistics course.

GETTING HELP!: : There is a Forum in MyCR to post questions about current assignments. Please post your questions there. If you are able to assist and correctly answer a fellow students question before I do, I will award you 1-point extra credit towards your Quiz score. I will also be arranging online office hours using the Chat Room in MyCR. Details on what days and hours this will be available will be announced.

ATTENDANCE: Mathematics Department Policy Regarding "Faculty Withdrawal" of Students after Census Day: A student who is absent from class for the amount of time equal to two weeks of classes, will be withdrawn from the course, unless there are extenuating circumstances that are communicated to the instructor in a timely manner. In an online class this means you must be showing progress by completing assignments on time and by participating in writing assignments posted in the Forum on MyCR.

GRADE SYSTEM : Your final grade will be approximately determined as follows

Homework	200 points
Writing Assignments	150 points

Quizzes/Activities   200 points
Exams   200 points
I will be using the plus/minus grade system approved at CR. The break down is as follows

A	93-100%	C	**72** -76.9%
A-	90-92.9%	D	60-71.9%
B+	87-89.9%	F	0-59.9%
B	83-86.9%		
B-	80-82.9%		
C+	77-79.9%		

Please note that a C- is not an option. Hence you will need 72% to pass the course with a C.
MyCR: We will be doing most of our communication through MyCR . Knowing how to work your way around MyCR is an essential part of the course. One of your first tasks is to make sure that your email address is up to date in MyCR and that you are receiving emails from me.

HOW TO SUCCEED IN AN ONLINE COURSE: High motivation and time management skills are required to complete distant education courses. The day-to-day contact with teachers and other students is typically lacking. Distant students may be balancing many responsibilities including employment and raising children. Often their involvement in distance education is unknown to those they work with and ignored by family members. Student performance is enhanced if learners set aside time for their instructional activities and if they receive family support in their academic endeavors. It is extremely important that you set regular times in your schedule to study the material and do the assigned work. This course requires a large amount of independent study time.
Time management is crucial for your success. Sitting in a classroom with a professor asking questions is a powerful inducement to be prepared. Sitting alone with a pile of assignments--and no professor in sight--affords the temptation to put off doing the work. You need to schedule this class into your life just as if it were a traditional on campus course. The amount of time per week needed is between 10 to 13 hours. Students have reported needing even more time to devote to this course.
Other critical skills are the ability to read and follow instructions. It is incumbent on the online student to read the assignment instructions and emails sent out by the instructor. Be sure and ask for any clarification on the requirements prior to an assignment being due.

If you are concerned about the ability to succeed in this class at anytime during the semester, please do not hesitate to send me an email. If I don't reply right away, send another.

INSTRUCTOR: Michael Butler
email: michael-butler@redwoods.edu