

Syllabus for Math 15 – Introduction to Statistics – Del Norte Education Center		
Semester & Year	Spring 2017	
Course ID and Section #	Math 15 - Section 041258	
Instructor's Name	Amber Buntin	
Day/Time	Monday-Wednesday 5:10-6:25pm	
Location	DM 15	
Number of Credits/Units	4 units	
Contact Information	<i>Office location</i>	E2 in the "Faculty Clubhouse"
	<i>Office hours</i>	BY APPT (email me)
	<i>Phone number</i>	707-465-2316
	<i>Email address</i>	amber-buntin@redwoods.edu
Textbook Information	<i>Title & Edition</i>	<i>Interactive Statistics 3rd Edition</i>
	<i>Author</i>	Martha Aliaga and Brenda Gunderson
	<i>ISBN</i>	0-13-149756-1
Course Description		
<p>As stated in CR's catalog: 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 probability techniques to make decisions via hypothesis testing and will estimate parameters using confidence intervals. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests; and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. The course includes applications using data from disciplines including business, social sciences, psychology, life science, health science, and education.</p> <p><i>Note: A graphing calculator is required TI-83 or TI-84 recommended. Prerequisite: MATH-120, 194, 102 or appropriate placement exam score.</i></p>		
Student Learning Outcomes		
<ol style="list-style-type: none"> 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		
<p>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 at 707-465-2352.</p>		

Syllabus for Math 15 – Introduction to Statistics – Del Norte Education Center

Academic Support

Academic support is available at [Counseling and Advising](#) and includes academic advising and educational planning, [Academic Support Center](#) for tutoring and proctored tests, and [Extended Opportunity Programs & Services](#), for eligible students, with advising, assistance, tutoring, and more.

Academic Honesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at: <http://www.redwoods.edu/board/Board-Policies/Chapter-5-Student-Services>. 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 website.

Disruptive Classroom Behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; physically or verbally abusive behavior. In such cases, where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, he or she may be reported the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at: <http://www.redwoods.edu/board/Board-Policies/Chapter-5-Student-Services>.

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 website.

Emergency Procedures for the Del Norte campus:

Please review the campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). The Crescent City campus emergency map is available at (<http://www.redwoods.edu/delnorte/Maps-and-Directions; scroll down to the Safety Map>). For more information on Public Safety, go to <http://redwoods.edu/publicsafety>. In an emergency that requires an evacuation of the building:

- Be aware of all marked exits from your area and building.
- Once outside, move to the nearest evacuation point outside your building:
- Keep streets and walkways clear for emergency vehicles and personnel.
- Do not leave campus, unless it has been deemed safe by the campus authorities.

RAVE – College of the Redwoods has implemented an emergency alert system. In the event of an emergency on campus, you can receive an alert through your personal email, and/or phones at your home, office, and cell. Registration is necessary to receive emergency alerts. Please go to <https://www.GetRave.com/login/Redwoods> and use the "Register" button on the top right portion of the registration page to create an account. During the registration process you can elect to add additional information, such as office phone, home phone, cell phone, and personal email. Please use your CR email address as your primary Registration Email. Your CR email address ends with "redwoods.edu." Please contact Public Safety, 707-476-4112, security@redwoods.edu, if you have any questions.

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

Math 15 ~ Introduction to Statistics

Mon-Wed – 5:10-6:25pm – DM 15 (Course number 041258)

Instructor Contact Info

Amber Buntin, Assistant Professor, Department of Mathematics

Phone: 707-465-2316 Email: amber-buntin@redwoods.edu

Canvas message is the preferred way to contact me!

Office hours (Faculty Clubhouse E2): BY APPOINTMENT (email me)

Math Lab Hours (DM 36): Mon/Wed 3:30-4:30pm
Tues/Thurs 11:30-12:30pm

You must be signed up to utilize the math lab (there is a FREE option)!

Classroom Environment and Attendance

It is essential to our class that both the students and teacher behave in a manner that will provide a comfortable learning atmosphere. Be respectful to one another. You should not hesitate to ask questions nor feel embarrassed to ask for help.

Class time is valuable, and while sometimes we will work on in-class activities, I ask that you DO NOT complete homework in class. Students miss the current material when working on assignments during lecture and often fall behind so it will not be tolerated.

You are expected to arrive on time and to leave upon dismissal. Arriving late or leaving before class is dismissed is disruptive and disrespectful to your fellow students as well as your teacher. Please be prepared with your headphones put away and cell phones SILENCED. If you have a job where you must have a radio/walkie (such as an emergency responder), or your phone on, please let me know right away!

If you must miss a day, please check with a classmate and/or Canvas to see what you missed and be sure to hand assignments in before the missed class!

Canvas

Our course canvas page will be updated regularly and will contain a variety of items such as: course announcements, class documents, assignments, review resources and much more. Be sure to turn on your notifications if you'd like to be notified about things like new announcements, changes to assignment due dates etc. **You will be expected to check canvas regularly and be aware of announcements made.**

Link to Canvas: <https://redwoods.instructure.com/>

Grades

		93-100%.....A
		90-92%.....A-
		88-89%.....B+
		83-87%.....B
		80-82%.....B-
		78-79%.....C+
		70-77%.....C
		0-69%.....D-F
Homework/Activities.....	20%	
Quizzes.....	15%	
Exams/Projects.....	40%	
Final Exam.....	25%	

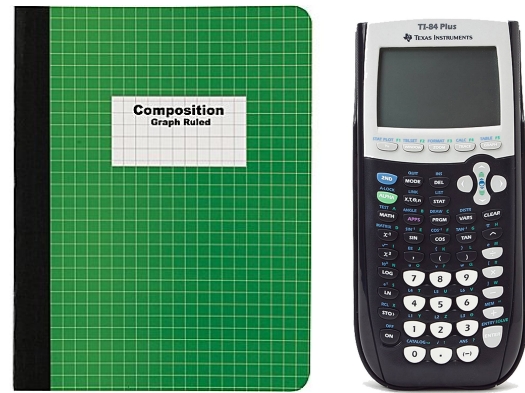
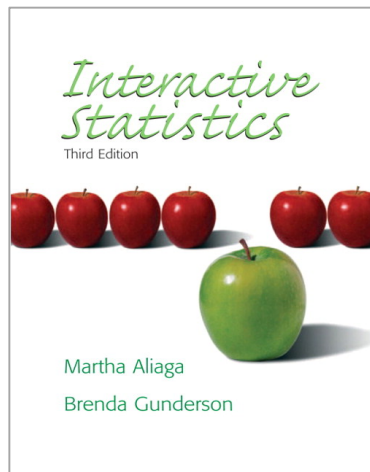
*** Final grade is at the professional discretion of the instructor ***

Required Materials

Textbook: *Interactive Statistics (3rd Edition)*

Author: Martha Aliaga and Brenda Gunderson

ISBN: #0-13-149756-1



StatCrunch 

- Textbook from Bookstore:
 - Rent – New 127.05, Used 90.75
 - Buy – New 181.50, Used 136.25
- Or purchase/rent the textbook online through a webpage such as Chegg.com, amazon.com etc.
- You will be required to read and complete exercises from your textbook

Required Supplies: Graphing calculators (TI-83+ or TI-84 recommended) are available to rent from the library for \$15 per semester (see Tanya at the main office and pick up from Lynn in the Library), a **license to StatCrunch Data Analysis Tool** (~\$14 for 6 months' access), a composition notebook (used as reference book), pencils and erasers, a binder and notebook paper to complete homework, ruler or straightedge and graph paper are needed. **Reliable access to a computer with an up-to-date internet browser and printing capabilities is also a requirement for work that will be completed in the course.**

Reference Book

You will be keeping a reference book that will contain important information you have learned throughout the semester such as definitions, formulas, and examples. This reference book is **NOT a book for you to write all your notes in**. It is for you filter through your class notes and to **re-write up** the important information/tips/notes to yourself about important concepts. Some students already write all their in-class notes VERY nice and neat and I will accept this as your composition notebook, **but you must get my approval**. I will collect your reference book during exams and grade them as a homework assignment (see **Reference Book Guidelines** page for more info).

Homework

Homework problems will be assigned nearly each lecture period, and are handed in on the announced due date (typically the next class period) at the beginning of class. We will have about 5-10 minutes reserved for homework questions each class. You are encouraged to work collaboratively on your homework but be sure to NOT COPY and check answers to ODD numbered problems in the back of the textbook.

Assignments are worth **5 points each** and graded according to the following **rubric**:

	5 pts - Exceptional Work	4 pts - Good Work	2-3 pts - Needs Improvement	1 pt - Unsatisfactory
Homework Labeled	Homework is labeled properly.	Homework is not quite labeled properly.	Homework not labeled properly.	
Neatness	Work is very nice and neat, proper math notation is used and follows the homework guidelines	Work is fairly neat, organized and easy to read. Mostly uses proper math notation.	Work is somewhat neat, organized and easy to read. Some errors in math notation.	Homework is not acceptable. Work is disorganized and difficult to read.
Work Shown	Work is shown in great detail in problem solutions.	Work is shown in problem solutions.	Several steps are missing in solutions.	Work is not shown.
Accuracy	There are no visible math errors.	There are at most 1-2 mathematical errors	There are many mathematical errors.	Excessive errors.
Completion	All HW problems are completed.	At most 1 problem is not attempted.	At most 2 problems were not attempted.	Several problems were not attempted.
Graphing (when applicable)	Graph paper and a ruler are used and axes are scaled and labeled properly. Printed graphs are exceptional.	Graph paper and a ruler are used for graphs, but axes may not be scaled or labeled properly.	Graph paper is used , but axes are not scaled or labeled properly.	Work was completed in pen, didn't use graph paper and doesn't follow the homework guidelines.

Homework con't

Please see “Homework Guidelines” for further details about HW expectations.

At the end of the semester, your **two** lowest homework scores will be dropped from your grade. Due to this, **I will not accept late work unless one of your three late work passes is attached.** Late passes can be used if you are sick, or there is an unexpected emergency etc. It is your responsibility to ensure that you get your HW turned in on time; if you know you will be missing class, you should turn your HW in **before** the due date, send it with a friend to class, or hand it in to the main office to be placed in my mailbox **before** class time on the due date.

Projects

There will be a project(s) using statistical analysis methods learned in class on a data set. More information about assignment requirements will be provided during the semester.

Quizzes

There will be an in-class OR take-home quiz nearly each week there is not an exam. In-class quizzes will be announced at least one class period in advance. For take-home quizzes, you may use your composition notebook, notes and textbook. You **MAY NOT** work with other students in class or get help at the math lab, the LIGHT center or from a tutor. All work shown on quizzes should be your own and should follow the HW guidelines. If I even suspect students work together on a quiz, both parties will receive a score of zero!

Exams and the Final

There will be 2-3 in class exams (40% of grade) throughout the semester and a **required** 2-hour comprehensive final examination (25% of grade). Every student is **REQUIRED** to take a cumulative final exam. I will notify the class **at least one week** in advance as to the date of each in-class exam. Before each exam, you will receive a study guide or practice problems. I will schedule a study session before each exam (either outside or inside of class).

All exams need to be taken in class **ON THE DAY OF THE EXAM** unless you have made prior arrangements with me. Be sure to make all travel plans accordingly as there will be no make-ups for missed exams except in extreme or emergency cases (must provide documentation). If you take exams in the LIGHT center, you need to make sure you make an appointment in advance so that you take the final exam at the designated time.

*****Final exam date and time to be determined*****

- If you have a documented disability or believe you can benefit from any of the services offered by Disabled Student Programs & Services (DSPS), please contact the DSPS office at 465-2352 (phone), 465-2388 (fax), TTY 465-2354 or view their webpage: <http://www.redwoods.edu/district/dsps/delnorte/index.asp>

Academic Honesty

Cheating is not accepted. If you are cheating, you will receive a grade of F in the course. Any violation of academic misconduct will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods. The student code of conduct is available on the College of the Redwoods website at:

<http://www.redwoods.edu/Portals/50/BoardPolicies/Chapter5/AP%205500.April%202016.pdf?ver=2016-11-21-132857-103>

Tutoring

- **The Math Lab.** I encourage you to enroll in MATH 15L, section 041089 for .5 unit (22.5 hours ~ 1.5 hrs a week req) or section 041090 for 1 unit (45 hours ~ 3 hrs a week req) of credit and in order to obtain supplementary help. This is the cheapest for-credit tutoring option available on campus and I can't stress enough the value. Math lab is located in DM 36 this semester.
- **MATH 252** Open Mathematics Lab (041259 No Credit) This is a free, no credit option to get math tutoring help. **If you do not need units** or want math help but cannot fulfill the hour requirements for mathlab, then this is the option for you!
- **GUID-147** Applied Study Skills & Strategies for Math (1-2 units credit available). DSPS students work with a tutor and other math students to aid your success. Please check webdvisor for course numbers. 36-72 hrs required.
- **OPTIMATH** practice assignments give immediate feedback and written out solutions: <http://msenux2.redwoods.edu/optimath/practice?course=math15>
- The **CR Math Jam** webpage is a great way to review concepts from Algebra and contains lessons as well as OPTIMATH assignments: <http://mathrev.redwoods.edu/mathjam/?s=public>

How to Succeed in this Course

- ✓ Read your text. It is best if you read the section of the text ahead of the scheduled lecture date on that topic.
- ✓ Be in class on time every day.
- ✓ Do your homework! Plan to spend at least 1-2 hours outside of class for every hour inside of class. That is the minimum investment of time for success in this course.
- ✓ Work with classmates. Mathematics is a social subject (but not a spectator sport). Working with fellow students helps in your own understanding of the ideas of the course (as you explain and/or hear others explain key concepts and procedures).
- ✓ READ and KEEP your returned work. When you get work back, look for any remarks that I have made. Keep your work in a binder to keep a record of your scores. This is to make sure I correctly enter your grades.

Faculty Withdrawal of Students

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% (~two weeks) 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 teacher will file the "Withdrawal" automatically.

Check Your Grade

Students should check grade regularly by accessing the following webpage:

<http://users.humboldt.edu/buntina/m15grades/grades.html>

Students are responsible for checking their grade often and for accuracy. Please come to see me if you have any questions about your grade, are struggling in the course, or find that there are errors/missing assignments (keep all returned work to verify).

To check your grade, you will need to enter information in the following format:

Username: Last name, First name

Password: CR student ID number (with **NO** leading zero)

Notice that you must use a capital letter for the first letter in your first and last name. There is also a **comma and a space** between your last and first name and **NO SPACES after your name or ID**. If you enter your information incorrectly, the system will not let you log on. **Email me immediately if you are having problems logging in.**

Final words

A few words about my expectations for you and myself in this course: My responsibilities include coming to class prepared to teach you mathematics, giving clear lectures, assigning carefully chosen homework problems that are relevant to our course and carefully preparing exam questions that accurately measure your progress in the course. Additionally, I am responsible to be available to you outside of class for consultation in office hours (by appointment...just email me ☺).

Likewise, I believe that you are ultimately responsible for your college education and I expect you to come to class motivated to learn the material. This involves keeping up with homework assignments, seeking additional help, either from me or from the many resources available to you here on campus, before it is too late.

Announcements will be made in class and often followed up in Canvas. When absent, students are expected to check email, Canvas, and/or with fellow classmates!

***** Syllabus Subject to Change *****

Guidelines for Writing Homework

Follow these guidelines for homework assignments so my grading experience much more pleasant ☺

1. Complete all homework assignments on a **separate sheet of paper**. You **may use both sides** of the paper. Do NOT complete assignments on the pages of your textbook.
2. **Staple** all homework in the upper left hand corner.
3. **Label** your homework with your name, course number, and section number in the upper right-hand corner (see example below).
4. Write your problems in order **DOWN** the page. Please **skip a line** between problems.
5. **Circle, box, or highlight** your answers to each exercise so I can find your answer quickly.
6. Please use **pencil** when writing your homework, and please write legibly and neatly. Presentation is a component of your homework score. **NO PENS!**
7. Be sure to **show your work** when solving a problem. A problem with just the answer and no work shown will receive **NO CREDIT**.
8. **Cut or tear off** any frilly edges on paper torn from a notebook.
9. When creating a graph, you **MUST USE GRAPH PAPER AND A RULER** or you will get a **ZERO** on the assignment.
10. If you are ever given two assignments due on the same day make sure complete them, and **staple them SEPARATELY**.

Staple in upper left corner.

Ima Student
Math 15
HW 7

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 .



Reference Book Guidelines

Math 15 – Spring 2017

Purpose: Your reference/composition notebook:

- helps you **study for exams** by *re-writing* in-class notes and determining what information is important to YOU.
- **improves overall organization** of notes.
- **may be used on some quizzes** if you submit it to be graded during exams & keep it up to date.
- can be very useful in your **future math courses!**

Requirements:

- You should purchase a **graph paper composition notebook**...You can also use a regular spiral bound notebook with graph paper.
- This book should be **SEPARATE from your in-class notebook** (unless class notebook is approved).
- **Write your name and CONTACT INFO inside of front cover/cover page.** In case you lose your book, you should have your name and an email address or phone number or address.
- **Skip at least 3 pages** in the beginning of your book for a **Table of Contents** (more if you write big). You should include description of the material you have written on a page, and page number (see the table of contents of your textbook or any book).
- **Number your pages** in the top right, or lower left.
- **Summarize concepts** you have learned using your own words. Make notes to yourself about strategies used, proper notation and your common mistakes.
- You must **write “a little something” from EACH section.** Even if you “know it already.” At the end of the semester, come the last exam, things that you know in the beginning of the semester, you may no longer have memorized.
- Your reference book will be **collected DURING Exams** and graded (homework category). It will be worth **5 points each time it is graded.**

Helpful Hints:

- **Do a little bit at a time.** Do not try to cram everything in there the night before an exam. Have your book out when you are doing homework and maybe jot down a particularly challenging example you encounter. In class, sometimes I will say “you might want to put this in your comp book.” Put a star by that info and copy it into book **right after** of class so you remember.
- **Use colors!** Maybe write/highlight definitions in green, examples in purple, important things to remember in red...and so on. Be creative!
- **Don’t write/highlight too much** as it will be difficult to find what you’re looking for when using it as a reference.
- **Make it YOURS!** Use colors, doodle in it, make it pretty and keep it neat :)

Late Work Pass #1

Math 15
Spring 2017

Name _____

Assignment _____

Value ONE homework to be handed in late without penalty before Exam

Authorized by Miss Amber Buntin

***May be used to hand in one late homework assignment. Cannot be used for in-class activities, big projects, quizzes, or exams. Not transferable to other students. Must be redeemed BEFORE the exam that contains information on the homework section that is late. Limit 3 per student per semester! Staple to front of assignment!

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Late Work Pass #2

Math 15
Spring 2017

Name _____

Assignment _____

Value ONE homework to be handed in late without penalty before Exam

Authorized by Miss Amber Buntin

***May be used to hand in one late homework assignment. Cannot be used for in-class activities, big projects, quizzes, or exams. Not transferable to other students. Must be redeemed BEFORE the exam that contains information on the homework section that is late. Limit 3 per student per semester! Staple to front of assignment!

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Late Work Pass #3

Math 15
Spring 2017

Name _____

Assignment _____

Value ONE homework to be handed in late without penalty before Exam

Authorized by Miss Amber Buntin

***May be used to hand in one late homework assignment. Cannot be used for in-class activities, big projects, quizzes, or exams. Not transferable to other students. Must be redeemed BEFORE the exam that contains information on the homework section that is late. Limit 3 passes per student per semester! Staple to front of assignment!

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