

Syllabus for Math 15-E7453

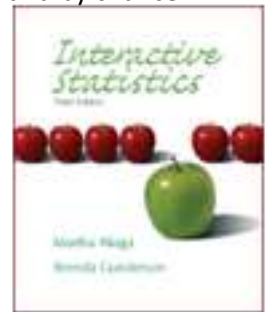
Introduction to Statistics

Course Information

Semester & Year:	Spring 2020
Course ID & Section #:	Math 15 E7453 <i>Introduction to Statistics</i>
Instructor's name:	Tami Matsumoto
Day/Time:	MWF 10:05am - 11:20am
Location:	Room SC208, in the Science Bldg at CR's Eureka Campus
Number of units:	4 units Lecture

Instructor Contact Information

Office location:	Room SC205B, behind the copy machine, 2 nd floor of Science Bldg
Office hours:	Tuesdays & Thursdays 3:20-4:20pm, also by appointment and by chance.
Phone number:	707.476.4543
Email address:	tami-matsumoto@redwoods.edu



Required Materials

Textbook title:	<i>Interactive Statistics</i> , 3 rd Edition
Edition:	3 rd edition
Author:	Aliaga & Gunderson
ISBN:	ISBN-10: 0-13-149756-1; ISBN-13: 978-0-13-149756-6

Other requirements: [materials, equipment or technology skills]

- **Graphing Calculator:** A TI-83 or TI-84 graphing calculator is required.
 - NOTE: A limited number are available for rent from the Math Lab in the ASC.
- **Bound Notebook with Grid Paper:** Something like Roaring Spring #77475 or Ampad #26-251 (about \$2 - \$6), for example. It should be bound and have graph paper in it. You will use this throughout the course to build yourself a reference book.
- **Internet Access:** For email (using your "mycr.redwoods.edu" account) and for Canvas
- **Time:** Plan on devoting Lots!! In your own weekly schedule you should block out 12 to 15 hours per week to devote to this class. Note: *The book has about 1000 pages!*
- **Engagement and Participation:** Math 15 is a very difficult course and requires your full attention. We will also incorporate group work and discussion. It is vitally important that all students are not just "present," but fully engaged and actively participating in the class **at all times**. To be "fully engaged" it is vital that all cell phones and other distractions be turned off and stowed away.

- If you anticipate that you will not be able to attend every class session, arriving by 10:05am and staying to 11:20am every Monday, Wednesday, and Friday through the entire semester, then you should not take this class. Or if you anticipate that you will not be able to do groupwork collegially and collaboratively with your classmates, respecting everyone's ideas, and treating everyone with kindness and consideration throughout the whole semester, then you should not take this class.
- Furthermore, if you would rather sit quietly in a math class, listen to lecture, take notes, go home, do a bunch of math problems independently, check the answers in the back of the book, and come back and do that all over again, then this class is not a good fit for you.
- **Perseverance:** This is a very demanding course. The nature of the course (the material and time constraints) requires that students work through confusion and adversity in order to succeed in this class.
- **Support System:** Since the course is very demanding and time-consuming, to be successful, students must have support outside of this class. Ideally this would include time and people who can help you study, along with time and people who can help create areas of your life within which you can work and study on your own.

Catalog Description

From Math15 Course Outline of Record 11.09.18: An introduction to basic concepts of descriptive and inferential statistics, with emphasis on the meaning and use of statistical significance. Students will use probability techniques to make decisions via hypothesis testing and will estimate parameters using confidence intervals. The course includes applications from a variety of technical and social science fields.

NOTE: The MATH-15S support course is strongly recommended to take concurrently for students without previous mathematical experience in courses such as Algebra II or Pathway to Statistics.

Course Student Learning Outcomes (*from course outline of record*)

1. Accurately communicate statistical ideas using correct statistical notation, graphs, and vocabulary.
2. Use descriptive and inferential statistics to better understand 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.

Prerequisites/co-requisites/ recommended preparation

- Pre-requisite: Completion of Intermediate Algebra or appropriate placement based on AB 705 mandates.

Evaluation & Grading Policy

Final Course Grade

Requirements for "A/A-":

- Participate in class with at least 90% of in-class work completed satisfactorily*
- Homework: complete at least 90% of Practice Problems; do 90% of "Basic" problems in a legible, satisfactory way; have good work done on majority of "Advanced" problems.**
- Reference Book: Create your own excellent Statistics Reference Book with Title Page, all or most topics covered with a corresponding Table of Contents.
- Exams/Quizzes: at least 85% average
- Data Projects: at least 90% average

Requirements for "B-/B/B+":

- Participate in class with at least 80% of in-class work completed satisfactorily*
- Homework: complete at least 85% of Practice Problems; do 80% of "Basic" problems in a legible, satisfactory way; have good work done at least some "Advanced" problems.**
- Reference Book: Create your own good Statistics Reference Book with Title Page, majority of topics covered with a corresponding Table of Contents.
- Exams/Quizzes: at least 75% average
- Data Projects: at least 80% average

Requirements for "C-/C/C+":

- Participate in class with at least 70% of in-class work completed satisfactorily*
- Homework: at least 70% of Practice Problems; 70% of "Basic" problems in a legible, satisfactory way**
- Reference Book: Create your own basic Statistics Reference Book.
- Exams/Quizzes: at least 65% average
- Data Projects: at least 70% average

Requirements for "D":

- Participate in class with at least 60% of in-class work completed satisfactorily*
- Homework: complete a majority of Practice Problems and "Basic" problems in a legible, satisfactory way**
- Reference Book: Create your own Statistics Reference Book.
- Exams/Quizzes: at least 50% average
- Data Projects: at least 60% average

For determination of +/- course grades, the entire class spread will be considered at the end of the term.

*regarding in-class work, exceptions are allowed if make-up arrangements are made in advance and missed work is made up

** Homework includes problems from the textbook, along with other handouts and assignments.

Due Dates: Each assignment will have a "due date" associated with it. Homework assignments will generally have a "due date" of the next class; you should try to finish the assignment before the next class, but, if you have questions, you can get help and then finish up the assignment and turn it in at the following class (without being considered late). Friday May 15 is the last day to submit any late work. Work that is returned to you for revision will have revised "due dates" (and will not be considered "late").

Institutional Policies

Special accommodations statement

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 accommodations, please see me or contact [Disability Services and Programs for Students \(DSPS\)](#). Students may make requests for alternative media by contacting DSPS at 707-476-4280, or by visiting the DSPS office in the Student Services Building, 1st floor.

Admissions deadlines & enrollment policies for Spring 2020

- *Spring 2020 semester begins: Saturday 1/18/20*
- *Martin Luther King Jr. Day (all-college holiday): Monday 1/20/20*
- *Last day to add a class: Friday 1/24/20*
- *Last day to drop without a W and receive a refund: Friday 1/31/20*
- *Census Day: Monday 2/3/20*
- *Lincoln's Birthday observed (no classes): Friday 2/14/20*
- *Last day to petition to file P/NP option (when available): Friday 2/14/20*
- *President's Day (all-college holiday): Monday 2/17/20*
- *Last day to petition to graduate or apply for certificate: Thursday 3/05/20*
- *Spring break (no classes): Monday-Saturday 3/16/20-3/21/20*
- *Last day for student-initiated W (no refund): Friday 4/3/20*
- *Last day for faculty-initiated W (no refund): Friday 4/3/20*
- *Final examinations: 5/9/20-5/15/20*
- *Semester ends: Friday 5/15/20*
- *Grades available for transcript release: approximately 6/1/20*

Students who have experienced extenuating circumstances can complete & submit the **Excused Withdrawal Petition** to request an Excused Withdrawal (EW) grade instead of the current Withdrawal (W) or non-passing (D, F & NP) grades. The EW Petition is available from the Admissions and Records Forms Webpage. Supporting documentation is required.

Academic dishonesty

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/or exam 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. 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 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; and 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, the student 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. 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](#).

Policies for this Class

Class participation and Attendance policy

In-Class Participation — It is extremely important that you attend each and every class session and participate and keep up. We cover 15 chapters in about 40 classes and it's nearly 1000 pages! That's about 25 pages per class session, on average. If you miss more than four class sessions, you may be dropped from the course.

Your participation during class is expected for things like the textbook's "***Let's Do It!***" activities. Sometimes collaboration via small-group work is allowed (even encouraged and expected), but you are still responsible for completing your own work. We will also often have group discussions, and you are expected to participate both as an active listener and as a contributor. Participation in this densely-packed and fast-moving class is essential for your success! I plan to record attendance each day and note students who are tardy, or who leave early, or who are not participating. If you have an issue that prevents you from attending (and paying attention) for an entire class period, I would appreciate it if you would advise me of that (I do not need details), and work out a "recovery plan" so that you don't lose out on too much information.

Communication Guidelines

To communicate with me outside of class, email or messaging via Canvas is generally fine. Please know, though, that these methods are not completely reliable; if you have not gotten a response the same day (or within 24 hours), please re-send your message using a different method (so if you emailed, try Canvas next). Phoning is also fine, but if you left a voicemail and have not gotten a timely response, please try another method (such as Canvas messaging) because often voicemail messages are difficult to hear clearly (sometimes due to your cell phone and your location when you call).

- **Note: With email messages, please include "Math15" as part of the Subject line.**

Please also feel free to drop in to see me in my office, even if it outside of regularly-scheduled office hours.

For me to communicate with you, I expect all of you to have online access for email and Canvas, as well as for other online resources. To communicate with the entire class at once, I will generally post an Announcement in Canvas; with more pressing information, I might also send a Canvas "message" to the entire class. Please check Canvas Announcements regularly.

I expect you to have access to email and I expect to be able to contact you easily. The College uses your "mycr.redwoods.edu" email address to communicate with you so it is important that you receive those email messages. Note that you can set up your redwoods email to autoforward to another email address if you would like. Instructions for autoforwarding are available online. Similarly, Canvas messages can be set to autoforward to your personal email, if you prefer; look under "Notifications" in Canvas.

Student privacy rights: legal rights of students prevent information from being disclosed to anyone (including parents/guardians) without the student's prior written consent.

Information for this Class

Class schedule

Class Meetings: This Math 15 class meets Mondays, Wednesdays, and Fridays, from 10:05am-11:20am, **except** for the following dates:

- Monday January 20, 2020. This is the Martin Luther King, Jr., Holiday and campus is closed.
- Friday February 14, 2020. Lincoln Day observed. No classes, but the campus will be open.
- Monday February 17, 2020. Washington Day observed (“Presidents Day”). CR Holiday, campus closed.
- The week of March 16 is Spring Break. There are no classes, and campus will remain open.
- Finals Week, May 11-15 – we do not meet at our regular class times – we only meet on Wednesday May 13, 10:45-12:45pm. Note that this is later and longer than our usual class. Please plan accordingly.

Class Start and End Dates:

- Wednesday January 22, 2020 is our first day of class.
- Friday May 8, 2020 is the date of our last regular class meeting.
- Wednesday May 13, 2020 is the Final class meeting (10:45am-12:45pm)
- Friday May 15, 2020 is the last day to submit any late work.

Class Content: The course material is organized into five Learning Units, with three chapters in each

At the end of each Unit, there will be a Unit Exam and a grade update.

Unit	Chapter Titles, pages	tentative exam dates
1	Chapter 1: How to Make Decisions with Statistics (pp 1-52, 62-66) Chapter 4: Summarizing Data Graphically (pp 211-284) Chapter 5: Summarizing Data Numerically (pp 299-333, 344-5)	Unit 1 Exam: Friday February 7
2	Chapter 6: Using Models to Make Decisions (pp 357-397) Chapter 7: Probability (pp 409-439, 454-470, 478-489) Chapter 2: Sampling Designs (pp 83-135)	Unit 2 Exam: Friday February 28
3	Chapter 8: Sampling Distributions (pp 499-545, 555-7) 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)	Unit 3 Exam: Wed. March 25
4	Chapter 3: Observational Studies & Experiments (pp 145-196) Chapter 11: Comparing Two Treatments (pp 669-727) Chapter 12: Comparing Many Treatments (pp 743-761, 791-3)	Unit 4 Exam: Wed April 15
5	Chapter 13: Regression Analysis (pp 807-901) Chapter 14: Analysis of Count Data (pp 921-966) Chapter 15: Nonparametric Statistics (pp 977-1002)	Unit 5 Exam: Friday May 1
1-5	Comprehensive Final Exam on Units 1-5 in Finals Week	Final Exam: Wed. May 13 (10:45am-12:45pm)

Canvas Information

We will use Canvas in this class for communication. In particular, you should check regularly for assignments (check after each class, assignments will generally be visible within an hour after class) and announcements (at least before you come to school on class days).

Log into Canvas at <https://redwoods.instructure.com>

Password is your 8 digit birth date

For tech help, email its@redwoods.edu or call 707-476-4160

Canvas Help for students: <https://www.redwoods.edu/online/Help-Student>

Canvas online orientation workshop: <https://www.redwoods.edu/online/Home/Student-Resources/Canvas-Resources>

Technology skills, requirements, and support

Tech equipment and skills are required for student success, and of equal importance as required textbooks and materials,

Students can obtain a free [Office 365 license](#) (includes Word, Excel, PowerPoint and more) with a valid CR email.

Necessary Computer Skills: Ability to use Canvas effectively and to receive and respond to emails and Canvas messages in a timely manner.

Technology Requirements: TI-83 or TI-84 graphing calculator is required. NOTE: *A limited number are available for rent from the Math Lab in the ASC.*

Technology Support: We will spend a bit of time during class discussing Canvas, and we will get instructions on the graphing calculator throughout the course. For more help, see me, or a tutor, or use the Math Lab.

Before contacting Technical Support please visit the [Online Support Page](#). For password issues with Canvas, Web Advisor or your mycr.redwoods.edu email, contact its@redwoods.edu or call 707-476-4160 or 800-641-0400 ext. 4160 between 8:00 A.M. and 4:00 P.M., Monday through Friday.

Preferred Name in Canvas

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact [Admissions & Records](#) to request a change to your preferred first name and pronoun. Your Preferred Name will only be listed in Canvas. It does not change your legal name in our records. See the [Student Information Update form](#). The form says that official documentation is required, but that is **only** required if you are changing your legal name; no documentation is required to change your preferred name in Canvas.

Gender-Inclusive Language in the Classroom

College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. CR encourages all instructors and students to use language that is gender-inclusive and non-sexist to affirm and respect how people describe, express, and experience their gender. Just as sexist language excludes women's experiences, non-gender-inclusive language excludes the experiences of individuals whose identities may not fit the gender binary, and/or who may not identify with the sex they were assigned at birth. Gender-inclusive/non-sexist language acknowledges people of any gender (for example, first year student versus freshman, humankind versus mankind, etc.), affirms non-binary gender identifications, and recognizes the difference between biological sex and gender expression.

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact [Admissions & Records](#) to request a change to your preferred first name and pronoun. Your Preferred Name will only be listed in Canvas. It does not change your legal name in our records. See the [Student Information Update form](#).

Emergency procedures / Everbridge

College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency on campus you will receive an alert through your personal email and/or phones. Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up-to-date by logging into WebAdvisor <https://webadvisor.redwoods.edu> and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions. For more information see the [Redwoods Public Safety Page](#).

In an emergency that requires an evacuation of the building anywhere in the District:

- 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 until informed by campus authorities that it has been deemed safe to do so.

Student Support Services

The following online resources are available to support your success as a student:

- [CR-Online](#) (Comprehensive information for online students)
- [Library Articles & Databases](#)
- [Canvas help and tutorials](#)
- [Online Student Handbook](#)

[Counseling and Advising](#) offers academic support and includes academic advising and educational planning

Learning Resource Center includes the following resources for students

- [Academic Support Center](#) for instructional support, tutoring, learning resources, and proctored exams.
- [Library Services](#) to promote information literacy and provide organized information resources.
- [Multicultural & Diversity Center](#)
- [Math Lab](#) Register in Math 15L or Math 252 to use the MathLab for Drop-in help all semester long!
- [ASC Tutoring](#) (available for free to all CR students)
- Drop-in Writing Center

Special programs are also available for eligible students include

- [Extended Opportunity Programs & Services \(EOPS\)](#) provides financial assistance, support and encouragement for eligible income disadvantaged students at all CR locations.
- The TRiO Student Success Program provides eligible students with a variety of services including trips to 4-year universities, career assessments, and peer mentoring. Students can apply for the program in [Eureka](#) or in [Del Norte](#)
- The [Veteran's Resource Center](#) supports and facilitates academic success for Active Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.
- Klamath-Trinity students can contact the CR KT Office for specific information about student support services at 530-625-4821
- The [Honors Program](#) helps students succeed in transferring to a competitive four-year school.

Caveat: This is the current plan for this course and is subject to change with fair notice.