

# Syllabus for Math 15 (Introduction to Statistics)

#### **Course Information**

Semester & Year: Spring 2020

Course ID & Section #: Math-15-K8731

Instructor's name: Daniel Ammon

Day/Time or \*Online: TueThur 6:40-8:45 pm

Location or \*Online: HTEC Room 1

Number of units: 4

#### **Instructor Contact Information**

Office location or \*Online: HTEC Room 1

Office hours: TueThur 5:20-6:20

Phone number: 530-625-5600 x1034

Email address: danny-ammon@redwoods.edu

#### **Required Materials**

**Textbook Title: Interactive Statistics** 

Edition: 3<sup>rd</sup> Edition

Author: Martha Aliaga and Brenda Gunderson

ISBN: 0-13-149756-1

Other requirements: graphing calculator (T-83 plus, or TI-84)

#### **Catalog Description**

### MATH-15 Introduction to Statistics - (4 units lecture)

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: A TI-83 or TI-84 graphing calculator is required. 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 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.

#### **Evaluation & Grading Policy**

**Problem Sets, assigned from the textbook:** Problems will be assigned every class. There will be "Basic" problems and "Advanced" problems (see grading information). Show your work, and work neatly and legibly.

**Reference Book:** Each student is required to create his/her own personal Statistics Reference Book throughout the term. It should be made in a bound notebook. It should have a title page at the front, followed by a table of contents. The contents should include material learned in the course. For the most part, it is up to you to decide exactly what to include, though there will be a few items I will direct you to be sure to include. Each page should be its own separate topic.

**Exams:** There is a Final Exam during Finals Week. The Final Exam will be comprehensive and you will be able to refer to your own Reference Book which you will be making throughout the semester.

**DUE DATES and LATE WORK**: Caveat on "due dates": While we are, by necessity, confined within a certain time framework, it is important to me that you understand the material – given that, if you have made progress on an assignment but are having trouble completing it by the due date, communicate with me to make appropriate arrangements. Homework assignments are worth 5 points each. They may be turned in up to one week late with no penalty. They may be turned in up to two weeks late with a 1-point deduction. They may not be turned in after 2 weeks late for any credit. Partially completed homeworks will have point(s) deducted.

Homework Exercises from book	30%
Participation	15%
Your own Statistics Reference Book	10%
Data projects/Quizzes	30%
Final Exam	15%

90 - 100%	Α
80 - 89%	В
70 - 79%	С
60 - 69%	D
Below 60%	F

#### Prerequisites/co-requisites/ recommended preparation

Prerequisite: Math 120, Math 194, or Math 102 Recommended: English 150 or English 102

#### 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 <u>Disability Services and Programs for Students</u>. Students may make requests for alternative media by contacting DSPS based on their campus location:

• Klamath-Trinity: 530-625-4821 Ext 103

#### 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.

# Institutional Policies

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- Eureka: 707-476-4280, student services building, 1<sup>st</sup> floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

#### Student Access (\*required for online classes)

These standards are required by federal regulation. Students will have access to this course that complies with the Americans with Disabilities Act of 1990 (ADA), Section 508 of the Rehabilitation Act of 1973, and College of the Redwoods policies. Course materials will include a text equivalent for all non-text elements; videos will include closed captioning, images will include alt-tags, hyperlinks will use descriptive/meaningful phrases instead of URLs and audio files will include transcripts. All text will be formatted for use with screen readers and all course materials will be understandable without the use of color.

Students who discover access issues with this class should contact the instructor.

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#### Class participation and Attendance policy

You must be in class and engaged/paying attention. If you cannot make it to class, you should notify the instructor and state the issue why you will not be in class. Notification using Canvas or email works the best.

#### Class schedule

The course material is organized into six Learning Units.

#### Unit 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 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 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 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 5

Chapter 13: Regression Analysis (pp 807-901)

#### Preferred Name in Canvas

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact <u>Admissions & Records</u> 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 <u>Student Information Update form</u>.

#### **Canvas Information**

If using Canvas, include navigation instructions, tech support information, what Canvas is used for, and your expectation for how regularly students should check Canvas for your class.

Log into Canvas at <a href="https://redwoods.instructure.com">https://redwoods.instructure.com</a>

Password is your 6 digit birth date

For tech help, email <a href="mailto:its@redwoods.edu">its@redwoods.edu</a> or call 707-476-4160

#### Technology skills, requirements, and support (required for online classes)

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 - [instructor: identify the computer skills necessary for students to succeed in your course.]

Technology Requirements (computer, other hardware, and software) - [instructor: identify the computer requirements and any hardware or software necessary for students to succeed in your class.]

Technology Support - [instructor: identify your role in providing technology support]

Before contacting Technical Support please visit the Online Support Page. For password issues with Canvas, Web Advisor or your mycr.redwoods.edu email, contact <a href="mailto:its@redwoods.edu">its@redwoods.edu</a> or call 707-476-4160 or 800-641-0400 ext. 4160 between 8:00 A.M. and 4:00 P.M., Monday through Friday.

#### 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. It therefore encourages 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.

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# Emergency procedures / 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 in order to receive emergency alerts. Please go to <a href="https://www.GetRave.com/login/Redwoods">https://www.GetRave.com/login/Redwoods</a> 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 at 707-476-4112 or <a href="mailto:security@redwoods.edu">security@redwoods.edu</a> if you have any questions.

#### Klamath Trinity Campus Emergency Procedures

Please review the <u>campus emergency map</u> for evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information on Public Safety go to the <u>Redwoods Public Safety Page</u> It is the responsibility of College of the Redwoods to protect life and property from the effects of emergency situations within its own jurisdiction.

In the event of an emergency:

- 1. Evaluate the impact the emergency on your activity/operation and take appropriate action.
- 2. Dial 911, to notify local agency support such as law enforcement or fire services.
- 3. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet.
- 4. If safe to do so, notify key Klamath-Trinity Instructional Site administrators and personnel.
- 5. Do not leave site, unless it is necessary to preserve life and/or has been deemed safe by the person in command.
- 6. If safe to do so, move to the nearest evacuation point outside building (Pooky's Park), directly behind the Hoopa Tribal Education Building.

#### **Student Support Services**

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

- <u>CR-Online</u> (Comprehensive information for online students)
- <u>Library Articles & Databases</u>
- 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

- <u>Academic Support Center</u> for instructional support, tutoring, learning resources, and proctored exams.
- <u>Library Services</u> to promote information literacy and provide organized information resources.
- Multicultural & Diversity Center [waiting for hyperlink and Mission]
- Math Lab & Drop-in Writing Center

Special programs are also available for eligible students include

- <u>Extended Opportunity Programs & Services (EOPS)</u> 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 4year universities, career assessments, and peer mentoring. Students can apply for the program in <u>Eureka</u> or in <u>Del Norte</u>
- The <u>Veteran's Resource Center</u> 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.