Syllabus for Math 15

Course Information

Semester & Year: Spring 2022
Course ID & Section #: MATH-15-E2871-2022S Intro to Statistics
Instructor's name: Trevor Keiber
Day/Time of required meetings: Monday and Wednesday 3:00 PM to 5:05 PM
Location: Eureka Campus Science Building, Room 214
Course units: 4

Instructor Contact Information

Office location: Academic Support Center (ASC) in the Eureak Campus Library
Office hours: Monday 10:30-2:30 PM, Wednesday 10-2:30 PM, Thursday 10-5 PM
Email address: trevor-keiber@redwoods.edu

Catalog Description

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.

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

Accurately communicate statistical ideas using correct statistical notation, graphs, and vocabulary.

Use descriptive and inferential statistics to better understand real-world problems.

Demonstrate appropriate use of technology in making decisions based upon real-world data.

Read and interpret information that contains statistical analysis and be able to communicate these results.

Judge the validity of research reported in the mass media and peer reviewed journals.

Prerequisites/co-requisites/ recommended preparation

Math 15 no longer has a formal math prerequisit. It is reccommended that the student is familiar with concepts from prealgebra and algebra.

Accessibility

College of the Redwoods is committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services and accommodations, please contact your instructor or Disability Services and Programs for Students (DSPS). Students may make requests for alternative media by contacting DSPS based on their campus location:

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

If you are taking online classes DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last minute arrangements or post-test adjustments usually cannot be accommodated.

Required Materials

Internet: Accesss to the internet is essential since we use Canvas for this class.

Textbook: We are using OpenStax Statistics which you can download for free from this link.
https://openstax.org/details/books/introductory-statistics

Evaluation & Grading Policy

Your grade is based off of points earned from online homework, written homework, class participation activities, discussion, exams, extra credit, projects, and possibly other kinds of assignments. All points from the class are equally weighted; your final score is the ratio the points you earned out of the total points possible.

Letter grades are assigned based on the following (generous) criteria:
A 100-90% , A- 89-87% , B+ 83-86% , B 78-82% , B- 75-77% , C+71-74% , C 67-73% , D/F 0-66%

Every week a new module will available for you to view in Canvas. There will be usually be a an online homework assigments which you need to complete by Sunday of that week. There will be critical thinking exercises, written homework and other assignments , all of which, will be posted on Canvas.

Class Participation

Since this class is being held in a classroom, it is expected that you attend class unless you have a valid reason not to be there such as medical, sports, family emergency ect. Instead of taking attendance, there will be an activty of some kind every day where you turn in someting which will be graded for credit. Essentially, if you make some kind of attempt on the inclass project you will get credit for the day, and if what you do is exceptional, you might earn extra credit. The class activities will generall be uploaded to canvas, giving you an opprutunity to complete the activity at home.

Exams

There will be two midterms and a final exam. Exams will account for approximatel 30% of your total grade in the class. It is possible that one or more exam has a takehome component or can be preplaced with a project.

Late Work Policy

To be succesful, you should turn in your assigments by the due date so that you do not fall behind in the class. That being said, I would rather you turn in something late, then to not do it at all, which is why I

allow most work to be turned in anytime before the end of the semester.
Canvas will automatically apply a 5 percent deduction each day on a late assignment to a maximum of 20%. This means that if you turn in something a week late or a month late, you could still possibly get 80%. I should mention, a fwe assignments cannot be turned in late including exams, few discussions, and possibly others.

Weekly Schedule

Week 1 (1/17): MLK day Monday + Course Introduction
Week 2 (1/24): Sampling and data
Week 3 (1/31): Descriptive Statistics
Week 4 (2/7): Discrete PDFs and the binomial distribution
Week 5 (2/14): Continuous PDFs [First Midterm]
Week 6 (2/21): Presidents Day + Normal distribution
Week 7 (2/28) Normal Distribution + Hypothesis testing
Week 8 (3/07) Hypothesis Testing
Spring Break (3/14)
Week 9: (3/21) Central Limit Theorem
Week 10: (3/28) One sample proportions and t-test
Week 11: (4/4) Confidence intervals [Second Midterm]
Week 12: (4/11) Two sample proportions and t-test
Week 13: (4/18) Chi-square distribution
Week 14: (4/25) Linear Regression
Week 15: (5/2) Linear Regression + ANOVA
Final Exam (5/9) Monday 3:15-5:15 PM

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 inclusive and respectful.

Student Support Services

Learning Resource Center includes the following resources for students

* Academic Support Center for instructional support, tutoring, learning resources, and proctored exams. Includes the Math Lab & Drop-in Writing Center
* Library Services to promote information literacy and provide organized information resources.
* Multicultural & Diversity Center

Special programs are also available for eligible students include

* Extended Opportunity Programs & Services (EOPS) provides services to eligible income disadvantaged students including: textbook award, career academic and personal counseling, school supplies, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!
* 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

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.