

Syllabus for Applied Statistical Methods I

Dr. Robin Donatello

MATH 315-01, Fall 2017

Course Description

Catalog Description:

Learning Outcomes

By the end of the semester students will be able to

- Collect data using online tools and record it in a format ready to analyze.
- Process, screen, recode, transform, and clean data.
- Describe data using visualizations and words.
- Select and carry out an appropriate statistical analysis.
- Explain study results and limitations to a non-technical audience.
- Understand and implement a reproducible research pipeline.
- Become a data nerd (Optional, but recommended).

Logistics

- **Instructor:** Dr. Robin Donatello
- **Office Location:** Holt 202
- **Phone Number:** 898-5767
- **E-mail:** rdonatello at csuchico dot edu
- **website:** <https://norcalbiostat.github.io/MATH315/>
- **Prerequisites:** Basic computer literacy. Recent statistics course such as Math 105.
- **Meeting Days and Times**
 - Section 02 MWF 10-11 noon HOLT 257
 - Section 01 MWF 12-1 pm HOLT 277

You can download the Syllabus in PDF form by clicking [this link](#).

Required Materials

- **Textbook:** Open Intro Statistics https://www.openintro.org/stat/textbook.php?stat_book=os
- **Reliable Laptop with internet connectivity:** Required to bring every day. Contact me if this poses a problem or concern for you.
- **Headphones:** In case you forget to watch a required video before class you may be asked to do so in class.
- **Computer Software:** All required software is free. Instructions on how to download and install can be found at this link: <https://norcalbiostat.netlify.com/post/software-overview/>
- **Blackboard Learn Use:** I will use Blackboard learn for
 - Regular Announcements (which will also get emailed to your campus email)
 - Submitting and returning assignments
 - Grades
 - Discussion board for outside of class collaboration.

Grading

- Your final grade will be a straight sum of points earned and will be displayed as a running total in Blackboard Learn.
- The approximate contributions per category are: Preparation & Participation 20%, Assignments 20%, Exams 30%, and Projects 40%.
- I use a standard grade cutoff of 100-90%: A, 89-80%: B, 79-70%: C, 69-60%: D, 0-59%: F. Pluses and minuses will be as displayed on Blackboard Learn.

Schedule of Topics

A more detailed schedule that is updated weekly can be found on the course website. The general ordering of topics is:

- Data Collection and recording
- Preparing data for analysis
- Data Visualization
- Foundations for Inference: Random variables, Parameters vs. Statistic, Confidence Intervals, Hypothesis Testing
- Inference for a single sample (t-tests, χ^2 tests)
- Inference comparing multiple samples (t-tests, ANOVA, χ^2 tests)
- Linear regression analysis (Simple and Multiple, Categorical predictors and contrasts)

Adding and Dropping the course

The last day to drop or add a course is 9/15/17. After this date, withdraws will only be allowed for serious and compelling reasons subject to department chair approval.

Americans with Disabilities Act

If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Please also contact Accessibility Resource Center (ARC) as they are the designated department responsible for approving and coordinating reasonable accommodations and services for students with disabilities. ARC will help you understand your rights and responsibilities under the Americans with Disabilities Act and provide you further assistance with requesting and arranging accommodations.

Accessibility Resource Center
530-898-5959
Student Services Center 170
arcdept@csuchico.edu

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