

Economics 3818-010: Introduction to Statistics with Computer Applications  
Spring 2023  
Department of Economics  
University of Colorado Boulder

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Cellular:

return in the marketplace.

The course consists of five closely related parts. The first part of the course introduces ways to explore data using visual and numerical measures. You will

calculator during exams. Graphing calculators such as the TI-83 or TI-84 are popular because they have a full array of built-in statistical functions plus graphing capabilities. Graphing is a nice extra, but not required. The main thing you will need is a calculator with full statistical functions. You will need to be versed in using these calculators for exams, and neither I nor the TA will be training you.

**R Computer Applications** –R is a free programming language that is available for Windows, Mac, and Unix operating systems. It is pre-installed on computers in most University computer labs and can be downloaded from the Internet. You will use the R Studio Interface to do R exercises. We will spend some of our class/recitation time working on these. R has good self-contained documentation in the basic R installation. On your first R exercise, you will get some basic training on how to install and do some basic operations in R. I will help you through the semester. An additional free resource is the book Modern R with the tidyverse by Bruno Rodrigues:

[https://b-rodrigues.github.io/modern\\_R/](https://b-rodrigues.github.io/modern_R/)

This free ebook provides instruction on programming in R. But mainly we are going to implement the

- Chapter 0 Getting Started
- Module 1
  - Chapter 1 Picturing Distributions with Graphs
  - Chapter 2 Describing Distributions with Numbers
- Module 2
  - Chapter 3 The Normal Distributions
  - Chapter 4 Scatterplots and Correlation
- Module 3
  - Chapter 5 Regression
  - Chapter 6 Two-Way Tables
- Module 4
  - Chapter 8 Sampling
  - Chapter 9 Experiments
- Module 5
  - Chapter 12 Introducing Probability
  - Chapter 13 General Rules of Probability
- Module 6
  - Chapter 14 Binomial Distributions
  - Mathematical Expectation
- Module 7
  - Chapter 10 Data Ethics
  - Chapter 15 Sampling Distributions
- Module 8
  - Chapter 16 Confidence Intervals: The Basics

Midterm 1	12%
Midterm 2	12%
Final	15%
Recitation	10%

**Clicker/Attendance (5%):** Clickers questions will be asked for the content learned during the class. Class attendance is automatically recorded once logged in at the iClicker cloud. Students are required to attend the class regularly. For flexibility of class attendance, you **may miss up to three sessions** for any (medical) reason with no penalty. Beyond these three, each absence will lower your grade unless we've come to an agreement in advance (regarding medical concerns, for example.) You'll be responsible for making up missed work and material for any missed class by liaising with your classmates. **More than 3/4 of the class attendance** is required to pass the course. Otherwise, students will automatically get the failing grade.

**Learning Curve (LC), Chapter Homework Exercises (HW) and Quizzes (QZ) (34%):** There will be weekly assignments for each chapter that are due at sets times. The lowest 2 scores of each LC, HW and QZ will be dropped (In other words, you **may miss up to 2 out of a series of the each weekly assignment** to receive full credit). **No late assignments will be accepted.** Assignments days are set for Learning Curve on M/W (total 21), HW on Thursday of the following next week (total 23), and Quizzes on Saturday

B-	< 80.0 %	to 76.0%
C+	< 76.0 %	to 74.0%
C	< 74.0 %	to 70.0%
C-	< 70.0 %	to 65.0%
D+	< 65.0 %	to 62.0%
D	< 62.0 %	to 45.0%
D-	< 45.0 %	to 40.0%
F	< 40.0 %	to 0.0%

***Important Dates***

January 18 (Wed.) – First Day of this Class

**February 17, Friday – Midterm 1**

**March 24, Friday – Midterm 2**

March 27-31 (Mon.-Fri.) – Spring Break (campus closed Fri., March 31)

May 3 (Wed.) – Last Day of

currently requires COVID-19 vaccination and boosters for all faculty, staff and students. Students, faculty and staff must upload proof of vaccination and boosters or file for an exemption based on medical, ethical or moral grounds through the MyCUHealth portal.

The CU Boulder campus is currently mask-optional. However, if public health conditions change and masks are again required in classrooms, students who fail to adhere to masking requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policy on classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please follow the steps in the “Accommodation for Disabilities” statement on this syllabus.

If you feel ill and think you might have COVID-19, if you have tested positive for COVID-19, or if you are unvaccinated or partially vaccinated and have been in close contact with someone who has COVID-19, you should stay home and follow the further guidance of the Public Health Office ([contacttracing@colorado.edu](mailto:contacttracing@colorado.edu)). If you are fully vaccinated and have been in close contact with someone who has COVID-19, you do not need to stay home; rather, you should self-monitor for symptoms and follow the further guidance of the Public Health Office ([contacttracing@colorado.edu](mailto:contacttracing@colorado.edu)). In this class, if you are sick or quarantined, you should contact the professor in order to make arrangements to keep up with the class and makeup assignments if necessary.

## Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting

access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution ([honor@colorado.edu](mailto:honor@colorado.edu)); 303-492-5550). Students found responsible for violating the [Honor Code](#) will be assigned resolution outcomes from the Student Conduct & Conflict Resolution as well as be subject to academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found on the [Honor Code website](#).

## Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, protected-class discrimination and harassment, and related retaliation by or against members of our community on- and off-campus. These behaviors harm individuals and our community. The Office of Institutional Equity and Compliance (OIEC) addresses these concerns, and individuals who believe they have been subjected to misconduct can contact OIEC at 303-492-2127 or email [cureport@colorado.edu](mailto:cureport@colorado.edu). Information about university policies, [reporting options](#), and support resources can be found on the [OIEC website](#). Please know that faculty and graduate instructors have a responsibility to inform OIEC