

## Course Syllabus

knowledge of basic statistical reasoning and understanding. Further our required econometrics courses build directly off of this course. Finally, this course helps you build a skill that has enormous potential financial 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 learn about summary measures for single variables and we will consider relationships between variables. The second part of the course introduces you to basic probability theory, popular probability distributions, and mathematical expectation. The third part of the course introduces you to sampling distributions and their properties, properties of estimators, confidence intervals, and hypothesis testing. The fourth part of the course is all applied statistical inference including inference about the mean of a probability distribution, inference about differences in two population means, inference about a single proportion from a population, and inference about differences in two proportions. The fifth and final part of the course further explores correlation and simple regression analysis and then adds inference about simple regression.

***Course Modality***

**This is an in-person course.** You will be required



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

Chapter 17 Tests of Significance: The Basics

Module 9

Chapter 18 Inference in Practice

Chapter 20 Inference about a Population Mean

Module 10

Chapter 21 Inference Comparing Two Means

Chapter 22 Inference about a Population Proportion

Module 11

Chapter 23 Inference Comparing Two Proportions



your accommodation letter from Disability Services to your faculty member in a timely manner so your needs can be addressed. Contact Disability Services at 303-492-8671 or [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu) for further assistance.

If you have a temporary medical condition or required medical isolation for which you require accommodation, contact your professor to ensure that you keep up the required work for the class. Also see [Temporary Medical Conditions](#) on the Disability Services website.

## PREFERRED STUDENT NAMES AND PRONOUNS

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

## HONOR CODE

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized 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-

Please know that faculty and graduate instructors have a responsibility to inform OIEC when they are made aware of incidents related to these policies regardless of when or where something occurred. This is to ensure that individuals impacted receive an