



Instructor: Dr. Sara Avila

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Office Hours: Tuesdays and Thursdays 9 am -10:30 am using Zoom

### INSTRUCTOR BIO

I am an economics instructor with more than two decades of experience. My research interests are in the fields of environmental economics and more recently, in how to teach economics. I have worked on topics related to air quality, climate change, urban transportation, and biodiversity conservation. I am passionate about building understanding in a diverse environment. I am also an avid (but aging) runner, so when I am not injured, I run every day.

June 3, 2024

July 26, 2024

### COURSE WEBSITE

\_\_\_\_\_  
Under Course List, click "ECON 3818: Introduction to Statistics"

Note: all email correspondence will be through your CU Boulder email address.

- o Do not use the Canvas email or messages, it is not checked.

### COURSE DESCRIPTION

This course introduces you to the principles of statistical reasoning and inference. To this end, the ultimate goals of the course are for you to thoroughly understand the following concepts: sampling distributions, hypothesis testing, and confidence intervals across multiple settings.

Organized into fourteen modules, the course is divided into four parts. The first part of the course provides an overview of how data is properly collected and how to explore data using visual and numerical methods. The second part is an introduction to probability theory, discrete and continuous probability distributions and mathematical expectation. The third part introduces sampling distributions, confidence intervals and hypothesis testing. Finally, the last section applies statistical inference to population means, to proportions and to simple regressions.



: <https://canvas.colorado.edu/> (Canvas) Grades and any further additional readings will be posted on Canvas. Please check Canvas frequently for any relevant notifications/changes that may occur throughout the course.

### SUPPLEMENTAL MATERIAL

You will use R, a free statistical package to conduct statistical analysis.

### INSTRUCTIONAL METHODOLOGY AND DELIVERY

This course is delivered via distance education format using the CU Canvas system. This format will use a combination of readings, online discussion, and other web-based resources. You will interact with the instructor and other students using the communication functions provided by Canvas. You will submit assignments in accordance with the course outline using Canvas. You will also have access to Achieve from the MacMillan Learning catalog.

### COURSE PRESENTATION AND PROCEDURES

There will be 16 modules, in 8 weeks (2 modules per week). You should proceed through one module every week, which will be comprised of readings from the course texts, supplemental class notes, graded discussion questions, exercises, and quizzes, exams, and various outside sources of information such as additional readings and video content, among other content.

### COURSE OUTLINE

Review the separate weekly class schedule

## EVALUATION AND GRADING

Course grades will be determined by the completion of assignments, exams, and discussions, as shown below:

Problem Sets*	25	10	250	25%
Quizzes*	20	10	200	20%
R Exercises	20	7	140	14%
Discussions	20	4	80	8%
Proctored Midterm Exam	150	1	150	15%
Proctored Cumulative Final Exam	180	1	180	18%
TOTAL			1000	100%

Keep a copy of all work created for the course, including work submitted through Canvas.

\*The lowest grade of these assignments will be dropped. See below.

### COURSE GRADING CRITERIA

Grade





## TUTORING

The Economics Department provides a free drop-in tutorial office which offers assistance on all core courses in the major, and occasionally on other undergraduate courses in the Department. Its website is <https://www.colorado.edu/economics/node/513/attachment>.

The Economics Department maintains a list of tutors who are available for private hire. Its website is <https://www.colorado.edu/economics/node/515/attachment>.

## TECHNOLOGY SUPPORT

CU Boulder uses Canvas.

Here is the list of recommended system requirements: [Canvas Computer Specifications Page](#)

Here is the detailed list of internet browsers in Windows, MacOS, iOS and Android: [Supported Browsers Page](#)

## Technical Support

Canvas technical support. If you are experiencing issues with Canvas please contact:

- CU Boulder's Help desk at 303-735-4357 (5-HELP) or [help@colorado.edu](mailto:help@colorado.edu). 5-Help will answer your call: Monday through Friday from 7:30 a.m. to 7:00 p.m., Saturday and Sunday from noon to 6:00 p.m., Closed during [University Holidays](#)
- On your computer, click the "help" (?) icon on the left side of Ca

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5. Treat people the same as you would face-to-face. In other words, it is easy to hide behind the computer. In some cases, it empowers people to treat others in ways they would not in person. Remember there is a person behind the name on your screen. Treat all with dignity and respect and you can expect that in return.
6. Respect the time of others. This class is going to require you to work in groups. Learn to respect the time of others in your group and your experience will be much better. Always remember that you are not the only person with a busy schedule, be flexible. Do not procrastinate! You may be one that works best with the pressures of the deadline looming on you, but others may not be that way. The same is true for the reverse. The key to a successful group is organization, communication and a willingness to do what it takes to get it done.

Website:



## ACCOMODATION 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 accommodations is located on the [Disability Services website](#). 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, see [Temporary Medical Conditions](#) on the Disability Services website.

## CLASSROOM BEHAVIOR

Both students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote or online. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy. For more information, see the [classroom behavior](#) policy, the [Student Code of Conduct](#), and the [Office of Institutional Equity and Compliance](#).

## HONOR CODE

"On my honor, as a University of Colorado Boulder student  
I have neither given nor received unauthorized assistance."

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code academic integrity policy. Violations of the Honor Code may include, but are not limited to: plagiarism, 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 the Honor Code ([honor@colorado.edu](mailto:honor@colorado.edu)); 303-492-5550).



### COURSE WITHDRAWAL POLICY

Any student who wishes to withdraw from the course must do so by September June 10. For complete information, please visit <https://ce.colorado.edu/resources/topics/dates-and-deadlines-general-info/>

### 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 accommodations is located on the [Disability Services website](#). 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, see [Temporary Medical Conditions](#) on the Disability Services website.

### ADDITIONAL SUPPORT SERVICES

A variety of instructional support services, such as writing center, guidance on personal or educational issues, tutoring questions and library resources are available to the students. For more information about their services, visit their websites linked under modules on Canvas.

