



ECON 3320 | Introduction to Economic Data Analysis

Section: 15895 | Asynchronous Online
12:00 AM-12:00 AM | University of Houston

Prerequisite(s): Completion of MATH 1314 and either MATH 1342 or BUSI 2305. Introduction to basic concepts in statistics with strong emphasis on the application of statistical methods to the analysis and interpretation of economic data. Topics include descriptive statistics, sampling theory, confidence interval, hypothesis testing, and simple linear regression analysis. Students will also learn how to carry out statistical analysis in spreadsheet programs like Excel.

General Course Information

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Office Hours

Tuesday and Thursday from 10:00 to 11:00 am

Course Objectives and Student Learning Outcomes

COURSE DESCRIPTION

Reviewing fundamental concepts in statistics with a strong emphasis on applying statistical methods to analyze and interpret economic data using statistical software. Students will learn how to carry out basic data management, programming, and statistical analysis in programs like Excel, R, and Stata. A lot of emphasis will be placed on telling a story with data.

LEARNING OUTCOMES

- Understand how to calculate and interpret descriptive statistics commonly used in economics.
- Use Excel, R, and Stata to summarize data numerically and graphically.
- Identify appropriate statistics and apply statistical concepts to economic data.
- Develop a strong conceptual understanding about statistical inference.
- Interpret results correctly, effectively, and in context without relying on statistical jargon.
- Apply statistical methods to evaluate and make data-based decisions.
- Set up the statistical foundations for econometric analysis.
- Tell a story with data!

Required Instructional Materials

TEXTBOOK: “Statistics for Business & Economics” by Anderson, Sweeney, Williams, Camm and Cochran, any of the latest editions (12th ed or later). Required textbook. Select WebAssign option ISBN 9780357715888

DataCamp

We use DataCamp to learn more about R. DataCamp is a platform that contains great coding examples. You will create a user using your cougarnet.uh.edu email. Also, include your name and last name to facilitate the grading process. Find your section, and you will see all the assignments’ corresponding due dates. Once you have completed one, download the certificate and upload it to Canvas.

Important: Those certificates will help you find internships and jobs, so I highly recommend including them on LinkedIn, Indeed, or similar sites. Many of my previous students have included that information in their resumes/CVs.

Here is the link for your section. Please create your user as soon as possible.

Course Schedule, Assignments, and Assessments

- Exam 1: Monday June. 16th
- Exam 2: Monday June. 30th

- Exam 3: Tuesday July. 1st

Discussion and Lecture Topics

A typical 3-credit-hour course consists of two lectures per week amounting to 3 hours of class work at least in addition to completion of problems sets and other assignments. Students are expected to devote at least 3 hours to 1) watch short pre-recorded lecture videos introducing different statistical concepts and going over examples and 2) quizzes based on material covered in lectures to assess students' comprehension and practice newly acquired skills. Please note that quizzes will also contain questions from previous weeks to facilitate retention of the course material. Please see more info about the "forgetting curve" theory [here](#). Viewing videos is required. All weekly quizzes/assignments must be completed by the end of each week! Quizzes will not be accessible after the due dates. Quizzes are available on Canvas and WebAssign.

Videos and quizzes are your class work. Reading textbook and completion of problem sets are expected to be done outside of class work. Please note that late submission of quizzes is not allowed. Depending on a covered material, multiple attempts will be allowed but not always. 10% of quizzes with lowest/missing scores will be dropped from final score calculations. Students will be required to work with data using software each week. Quizzes will contain questions based on data analysis.

Grading Rubrics and Weights

GRADING

Grades will be calculated using the following weights:

- Problem Sets (15%)
- Weekly quizzes(15%)
- Exam 1 (Ch. 1-6)(35%)
- Exam 2 (Ch. 7-10)(35%)

Formula for grade calculation: $\text{Score} = 0.35 \times \text{Exam 1} + 0.35 \times \text{Exam 2} + 0.15 \times \text{Problem Set Average} + 0.15 \times \text{Quizzes}$

Note that Problem Set average cannot exceed 100. That is, if a student gets many extra credits due to early submissions and the average across all problem sets is greater than 100, this score will be capped at 100. That is, there is a possible spillover of points from one problem set to another but there is not spillover from problem sets to other assignments.

I follow the standard grading scale (93-100 is A, 90-92.9 is A-, 87-89.9 is B+ and so on). However, there may be an adjustment (curve) of the grade distribution at the end of the semester. Individual assignments will not be curved.

Course Policies and Procedures

All exams will require a webcam attached to the computer you are using. You will download the testing software, Respondus LockDown Browser. It will require you to show your I.D. (UH ID is fine) to the camera before taking the exam. The webcam attached to your laptop or built-in cameras are appropriate. Exams taken without proper identification or camera detecting you during the Exam time will have ZERO grade!

Each exam is designed to be 1 hour and 15 minutes long. Students will be given a 12-hour window to complete an exam.

Exams will not require any work with statistical software. Students will be provided with output and asked to interpret results in addition to numerical and theoretical questions. Exams will consist of multiple choice, numerical calculation, and open-ended questions.

There is no make-up exam unless a student has been involved in an accident (proof from the police) or has been seriously ill and shows a proof from the doctor/hospital. Unapproved absence from any exam counts as a zero. It is the professor's decision whether the student can take the exam, after showing the required proof. Contact me ASAP before/after a missed exam and we can discuss options but no later than the end of the day.

Exam 3 has two parts: The 1st part is the make-up for Exam 1 and covers the same materials as Exam 1. The 2nd part is the make-up for Exam 2 and covers the same materials as Exam 2. Exam 3 is not mandatory for those who have taken both earlier Exams. However, if a student takes any part of Exam 3, their grade from that part will replace their grade from the corresponding earlier Exam. Finally, students can't take both parts of Exam 3.

University Policies and Student Support Resources

Mental Health and Wellness Resources

The University of Houston has a number of resources to support students' mental health and overall wellness, including [CoogsCARE](#) and the [UH Go App](#). [UH Counseling and Psychological Services \(CAPS\)](#) offers 24/7 mental health support for all students, addressing various concerns like stress, college adjustment and sadness. CAPS provides individual and couples counseling, group therapy, workshops and connections to other support services on and off- campus. For assistance visit uh.edu/caps, call 713-743-5454, or visit a [Let's Talk](#) location in-person or virtually. Let's Talk are daily, informal confidential consultations with CAPS therapists where no appointment or paperwork is needed.

Need Support Now? If you or someone you know is struggling or in crisis, help is available. Call CAPS crisis support 24/7 at 713-743-5454, or the National Suicide and Crisis Lifeline: call or text 988, or chat 988lifeline.org.

Title IX/Sexual Misconduct

Per the UHS Sexual Misconduct Policy, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and state law and must report incidents of sexual misconduct (sexual harassment, non-consensual sexual contact, sexual assault, sexual exploitation, sexual intimidation, intimate partner violence, or stalking) about which they become aware to the Title IX office (known at UH as the Equal Opportunity Services office or "EOS"). Please know there are places on campus where you can make a report in confidence. You can find more information about resources on the UH [Title IX/Sexual Misconduct Resources page](#). Please note that you may also report concerns of discrimination based on your protected class identity to EOS.

Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston is committed to providing an academic environment and educational programs that are accessible for its students. Any student with a disability who is experiencing barriers to learning, assessment or participation is encouraged to contact the Justin Dart, Jr. Student Accessibility Center (Dart Center) to learn more about academic accommodations and support that may be available to them. Students seeking academic accommodations will need to register with the Dart Center as soon as possible to ensure timely implementation of approved accommodations. Please contact the Dart Center by visiting the website: <https://uh.edu/accessibility/> calling (713) 743-5400, or emailing jdcenter@Central.UH.EDU.

The [Student Health Center](#) offers a Psychiatry Clinic for enrolled UH students. Call 713-743-5149 during clinic hours, Monday through Friday 8 a.m. - 4:30 p.m. to schedule an appointment.

The [A.D. Bruce Religion Center](#) offers spiritual support and a variety of programs centered on well-being.

The [Center for Student Advocacy and Community \(CSAC\)](#) is where you can go if you need help but don't know where to start. CSAC is a "home away from home" and serves as a [resource hub](#) to help you get the resources needed to support academic and personal success. Through our [Cougar Cupboard](#), all students can get up to 30 lbs of FREE groceries a week. Additionally, we provide 1:1 appointments to get you connected to on- and off-campus resources related to essential needs, safety and advocacy, and more. The [Cougar Closet](#) is a registered student organization advised by our office and offers free clothes to students so that all Coogs can feel good in their fit. We also host a series of cultural and community-based events that fosters social connection and helps the cougar community come closer together. Visit the CSAC homepage or follow us on Instagram: @uh_CSAC and @uhcupbrd. YOU belong here.

Women and Gender Resource Center

The mission of the [WGRC](#) is to advance the University of Houston and promote the success of all students, faculty, and staff through educating, empowering, and supporting the UH community. The WGRC suite is open to you. Stop by the office for a study space, to take a break, grab a snack, or check out one of the WGRC programs or resources. Stop by Student Center South room B12 (Basement floor near Starbucks and down the hall from Creation Station) from 9 am to 5 pm Monday through Friday.

Academic Honesty Policy

High ethical standards are critical to the integrity of any institution, and bear directly on the ultimate value of conferred degrees. All UH community members are expected to contribute to an atmosphere of the highest possible ethical standards. Maintaining such an atmosphere requires that any instances of academic dishonesty be recognized and addressed. The [UH Academic Honesty Policy](#) is designed to handle those instances with fairness to all parties involved: the students, the instructors, and the University itself. All students and faculty of the University of Houston are responsible for being familiar with this policy.

Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston [Undergraduate Excused Absence Policy](#) and [Graduate Excused Absence Policy](#) for reasons including medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to [military service](#), [religious holy days](#), [pregnancy and related conditions](#), and [disability](#).

Recording of Class

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the [Justin Dart, Jr. Student Accessibility Center](#). If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with anyone without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.