# ECON 3818: Intro to Statistics with Computer Applications 

T/TH 12:30-1:45
Room: EDUC 155

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Office Hours: M/W 12:00-1:00 and by appointment

Please allow me 24 hours to respond to all emails. If you need help with course material, please see me during my office hours. If you need more help than can be provided in office hours, consider visiting the department's undergraduate tutor or viewing the department's private tutor list: http://www.colorado.edu/econ/undergraduate/tutor_list.pdf

Course Description: Understanding statistics is an important component of economics, and life in general. For your economics career, this class will be essential when moving on to econometrics, one of the most useful applications of economic knowledge.

Prerequisites: Econ 2010 \& 2020. Econ 1088 (or an approved similar course). This class requires algebra and calculus so exposure to these concepts is required.

## Required Materials:

- Textbook: The Basic Practice of Statistics. David Moore, William Notz, and Michael A Fligner.
- Computer Application: $\mathbf{R}$ is a free programming language that is utilized primarily for data analysis. We will spend time throughout the course working on $\mathbf{R}$ exercises through the RStudio interface.


## Grading:

$\left|\begin{array}{c|c}10 \% \text { Homework } & 20 \% \text { Midterm 1 } \\ 10 \% \text { Recitation } & 20 \% \text { Midterm } 2 \\ 5 \% \text { R Exercises } & 30 \% \text { Final Exam } \\ 5 \% \text { R Project } & 5 \% \text { Extra Credit }\end{array}\right|$

## Grading Scale:

| Grade | Percentage | Grade | Percentage |
| :---: | :---: | :---: | :---: |
| A | $93 \leq x$ | C | $73 \leq x<77$ |
| A- | $90 \leq x<93$ | C- | $70 \leq x<73$ |
| B+ | $87 \leq x<90$ | D+ | $67 \leq x<70$ |
| B | $83 \leq x<87$ | D | $63 \leq x<67$ |
| B- | $80 \leq x<83$ | D- | $60 \leq x<63$ |
| C+ | $77 \leq x<80$ | F | $\mathrm{x}<60$ |

Homework: There will be weekly homework problems assigned through the Sapling website. These will be due by $11: 59 \mathrm{pm}$ on most Sundays. You can access assigned homework problems through Canvas. No late homework will be accepted. You cannot make up missed homework; instead, your two lowest homework grades will be dropped.

R Project \& Exercises: There will be five simple R assignments and one data project throughout the semester due on Wednesdays in class. The R project will be worth $5 \%$ and the R assignments will each be worth $1 \%$ for a total of $5 \%$ toward your final grade. We will work on these assignments in class the week before they are due. R assignments must be physically handed in to be graded. If you are absent the day an R assignment is due, you must email me a copy before class starts and bring in a hard copy the next lecture you attend. I will only grade hard copies of the assignments.

Recitation: Recitation attendance is mandatory. Not only will your grade in recitation account for $10 \%$ of your final grade in the course, but there will be material provided in recitation that is crucial for success in the course. Your TA is PhD student Austin Hamilton. Refer to his syllabus to see how recitation grades are determined.

Exams: There will be two midterms throughout the semester. They will consist of multiple choice questions along with a few free response questions. You will be allowed to bring a $3 x 5$ " index card with notes to refer to during the exam. Any tables required will be provided by the instructor. There will be no make-up exams. If you miss an exam and there is documentation of a medical or family emergency, then the weight of that exam will be added to the final exam.

Extra Credit: The only extra credit opportunity will be through iClickers. There will be roughly 2-3 clicker questions per lecture. A maximum of five percentage points will be added to your grade for excellent clicker participation. Make sure to register your iClickers, instructions provided here:
https://oit.colorado.edu/tutorial/cuclickers-iclicker-remote-registration

## Tentative Course Outline

- Bring your laptop on $R$ days!
- R exercises are due on Thursdays in class one week after in-class practice.
- Homework due on Sundays at 11:59 p.m.

| Week | Tuesday | Thursday | Due |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Week 1, Aug 26 | CH 1 | CH 2, $R$ day | HW-1 |  |  |
| Week 2, Sept 2 | CH 12 | CH 13 | R-1, HW-2 |  |  |
| Week 3, Sept 9 | CH 14 | CH 3, $R$ day | HW-3 |  |  |
| Week 4, Sept 16 | Distribution | Expectation | R-2 |  |  |
| Week 5, Sept 23 | CH 8, 9 | Review | HW-4 |  |  |
| Week 6, Sept 30 | Midterm 1 | Estimation |  |  |  |
| Week 7, Oct 7 | CH 15 | CH 16 | HW-5 |  |  |
| Week 8, Oct 14 | CH 17 | $R$ day | HW-6 |  |  |
| Week 9, Oct 20, | CH 18 | CH 20 | R-3, HW-7 |  |  |
| Week 10, Oct 28 | CH 21 | Review, $R$ day | R-4 |  |  |
| Week 11, Nov 4 | Midterm 2 | $R$ day | HW-8 |  |  |
| Week 12, Nov 11 | CH 4 | CH 6 | R project, HW-9 |  |  |
| Week 13, Nov 18 | CH 5 | CH 26 | HW-10 |  |  |
| Week 14, Nov 25 | Fall Break - No classes |  |  |  | R-5 |
| Week 15, Dec 2 | CH 26 | $R$ day |  |  |  |
| Week 16, Dec 9 | Review | Review |  |  |  |
| Finals Week | Final Exam: Sunday, Dec 15th 4:30-7:00 pm |  |  |  |  |

The schedule is subject to change, and any changes will be announced in class.

## University Policies

Students with Disabilities: If you qualify for accommodations because of a disability, please submit to me a letter from disability services in a timely manner so that your needs can be addressed. Disability services determine accommodations based on documented disabilities. Contact: 303-492-8671, Center for Community N200.

Religious Observance Policy: Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. If you have a conflict, please contact me at the beginning of the term so we can make proper arrangements.

Honor Code: All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at: http://www.colorado.edu/policies/honor.html and at http://www.colorado.edu/academics/honorcode/

Discrimination \& Harassment Policy: The University of Colorado Policy on Sexual Harassment applies to all students, staff and faculty. Sexual harassment is unwelcome sexual attention. It can involve intimidation, threats, coercion, or promises or create an environment that is hostile or offensive. Harassment may occur between members of the same or opposite gender and between any combinations of members in the campus community: students, faculty, staff, and administrators. Harassment can occur anywhere on campus, including the classroom, the workplace, or a residence hall. Any student, staff or faculty member who believes $s /$ he has been sexually harassed should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH and the campus resources available to assist individuals who believe they have been sexually harassed can be obtained at: http://www.colorado.edu/odh/

