Course Goals: Examines point and confidence interval estimation and comparison of estimators, covering principles of method of moments, maximum likelihood, sufficiency, completeness, and uniformly minimum variance unbiased estimation. Also covers development of tests for simple and composite hypotheses, including uniformly most powerful tests and likelihood ratio tests. Includes probabilistic convergence concepts and asymptotic properties of estimators and tests.

Prereqs.: APPM 3570 or MATH 4510.

Lecture Notes: An Introduction to Mathematical Statistics, by J.N. Corcoran (Download in D2L!)

Grade Determination: Your grade will be determined by Homework (25%), two Midterms (25% each), and a final exam (25%). Approximate grade lines will be:

\[ A- \geq 90\% \quad B- \geq 80\% \quad C- \geq 70\% \quad D \geq 60\% \]

You must earn an average of 55% or better on your exams (midterms and final) in order to earn a D or better grade in the course. After the final exam, if your exam scores average to less than 55%, it is not possible to earn a D or better in the class. After the final exam, if your exam scores average to 55% or better, then your homework points will be factored in to determine your course grade. Note that it is possible to have a 55% average on the exams and still earn a D or F in the course if your homework scores are low.

Exams: There will be two evening midterm exams from 7–9 pm on Thursday October 5th, and Thursday November 9th. The locations are to be announced. If you have a legitimate conflict with either of these times, please let your instructor know immediately.

Final: Each section has its own non-comprehensive final exam:

Section 001 (Manuel Lladser): Wednesday, December 20th, 2–4 pm.
Section 002 (Jem Corcoran): Monday, December 18th, 2–4 pm.

Homework: With a few exceptions surrounding exam weeks, homework will be assigned every Wednesday and will be due on the following Wednesday. Please see the course website for specific dates. Homework is due on the listed dates at (or before) the beginning of class. As a courtesy, you have up until 5pm on these dates to submit it. Homework will no longer be accepted after 5pm on its due date. You are strongly encouraged to turn in your Homework at the beginning of class; instructors and TAs will no longer take questions on an assignment during the grace period.

Graduate Students: Students taking this course for graduate credit will have extra homework problems and a take home exam in addition to the scheduled evening exams. You may also be held to a higher standard of grading.

Accommodations for Disabilities: If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your instructor 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 (www.colorado.edu/disabilityservices/students). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see Temporary Medical Conditions under the Students tab on the Disability Services website and discuss your needs with your instructor.

**Religious Holidays:** Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Please contact your instructor during the first two weeks of class to let her/him know of any possible conflicts in order to make the necessary arrangements.

**Classroom Behavior:** Students and faculty each have responsibility for maintaining an appropriate learning environment. 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. Class rosters are provided to the instructor with the student’s legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior and the Student Code of Conduct.

**Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation:** The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CU’s Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulder’s Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the OIEC website.

**Honor Code:** All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the academic integrity policy. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at the Honor Code Office website.

See course website at:

https://www.colorado.edu/amath/course-pages/fall-2017/appm4520

for further information about the course schedule and policies.