STAT:4101   Statistical Inference II
Sprng, 2025

1. Instructor: Kung-Sik Chan   SH 241   335-2849   `kung-sik-chan@uiowa.edu`
   drop-in hours: Tue 1pm-2pm and Fri 1pm-3pm or by appointment.

2. Department: Statistics and Actuarial Science DEO contact information (Kung-Sik Chan, 241 SH, phone: 319-335-2849, email: `kung-sik-chan@uiowa.edu`)

3. Time and location of class: 10:30am - 11:20am MWF; 140 SH

   All lecture notes will be posted on ICON. Class attendance is an essential part of learning and you are encouraged to attend every class. In case you miss a class, you may view the lecture materials posted on ICON.

4. Textbook:
   "Statistical Inference" (2nd edition) by G. Casella and R.L. Berger, ISBN: 9780534243128

5. Description of course: We will cover chapters 6 to 10 of the textbook "Statistical Inference." We aim to give a relatively rigorous treatment on several topics that provide the foundation of statistical inference. Topics include data reduction, sufficient statistics, ancillary statistics, efficiency, robustness, estimation methods (method of moments, maximum likelihood, estimating equations), point and interval estimates, hypothesis testing and asymptotic methods.

6. Learning Objectives:

   (a) Understanding of the general principles of statistical inference.
   (b) Assessing the uncertainty in statistical inference.
   (c) Constructing and critiquing statistical methods for statistical inference.
   (d) Using statistical reasoning for decision making.

   After taking this class, students will have a solid understanding and the knowhow of general statistical inference with data.

7. Prerequisite: STAT:4100 or equivalent

8. Course requirements:

	date	percent
Homework		25%
Exams	2/19, 3/26, 4/18	48%
Final Exam	TBA	27%

   Several homework assignments will be given. Discussion with fellow students on the exercises of the homework is allowed, but each student must write their own solutions. One homework with the lowest score will be dropped from the determination of the final grade. All HW and exams are cumulative, with greater weight on recently introduced topics/materials. Exams are closed book.

9. The teaching assistant Mr. Ting-Hung YU will hold weekly drop-in hour, with the meeting time and location to be announced. During the drop-in hours, Mr. Ting-Hung Yu (ting-hung-yu@uiowa.edu) will answer questions on course materials and work out further examples for illustrating the concepts taught in the class.

10. Grading policy: Your grade for this course will be assigned according to the following *approximate* scale:

87	to	100	A
75	to	86	B
65	to	74	C
50	to	64	D
0	to	50	F

This scale is not absolute, and the cutoff points may vary depending on the difficulty of the exams. Also, borderline cases may receive a + or −. The College and EPC ask that the A+ grade be used only in extraordinary situations.

Listed on the next two pages are collegiate and university policies.

Academic Honesty and Misconduct
All students in CLAS courses are expected to abide by the [CLAS Code of Academic Honesty](). Undergraduate academic misconduct must be reported by instructors to CLAS according to [these procedures](). Graduate academic misconduct must be reported to the Graduate College according to Section F of the [Graduate College Manual]().

Student Complaints
Students with a complaint about a grade or a related matter should first discuss the situation with the instructor and/or the course supervisor (if applicable), and finally with the Director or Chair of the school, department, or program offering the course.

Undergraduate students should contact [CLAS Undergraduate Programs]() for support when the matter is not resolved at the previous level. Graduate students should contact the CLAS [Associate Dean for Graduate Education and Outreach and Engagement]() when additional support is needed.

Drop Deadline for this Course
You may drop an individual course before the deadline; after this deadline you will need collegiate approval. You can look up the [drop deadline for this course]() here. When you drop a course, a "W" will appear on your transcript. The mark of "W" is a neutral mark that does not affect your GPA. Directions for adding or dropping a course and other registration changes can be found on the [Registrar's website](). Undergraduate students can find policies on dropping CLAS courses [here](). Graduate students should adhere to the [academic deadlines]() and policies set by the Graduate College.

Date and Time of the Final Exam
The [final examination date and time]() will be announced by the Registrar generally by the fifth week of classes and it will be announced on the course ICON site once it is known. **Do not plan your end of the semester travel plans until the final exam schedule is made public. It is your responsibility to know the date, time, and place of the final exam.** According to Registrar's final exam policy, students **have a maximum of two weeks after the announced final exam schedule** to request a change if an exam conflict exists or if a student has more than two exams in one day (see the [policy]()here).

Attendance and Absences
Students with UI-authorized activities must discuss their absences with the instructor as soon as possible. Religious obligations must be communicated within the first three weeks of classes.

Communication: UI Email
Students are responsible for all official correspondences sent to their UI email address (uiowa.edu) and must use this address for any communication with instructors or staff in the UI community. For the privacy and the protection of student records, UI faculty and staff can only correspond with UI email addresses.

Mental Health Resources and Student Support

Students are encouraged to be mindful of their mental health and seek help as a preventive measure or if feeling overwhelmed and/or struggling to meet course expectations. Students are encouraged to talk to their instructor for assistance with specific class-related concerns. For additional support and counseling, students are encouraged to contact University Counseling Service (UCS). Information about UCS, including resources and how to schedule an appointment, can be found at counseling.uiowa.edu. Find out more about UI mental health services at mentalhealth.uiowa.edu.

Student Care and Assistance provides assistance to University of Iowa students who are experiencing a variety of crisis and emergency situations, including but not limited to medical issues, family emergencies, unexpected challenges, and sourcing basic needs such as food and shelter. More information on the resources related to basic needs can be found at basicneeds.uiowa.edu/resources/. Students are encouraged to contact Student Care & Assistance in the Office of the Dean of Students (Room 135 IMU, dos-assistance@uiowa.edu, or 319-335-1162) for support and assistance with resources.

University Policies

Accommodations for Students with Disabilities
The University is committed to providing an educational experience that is accessible to all. If a student has a diagnosed disability or other disabling condition that may impact the student's ability to complete the course requirements as stated in the syllabus, the student may seek accommodations through Student Disability Services (SDS). SDS is responsible for making Letters of Accommodation (LOA) available. **The student must provide an LOA to the instructor as early in the semester as possible, but requests not made at least two weeks prior to the scheduled activity for which an accommodation is sought may not be accommodated.** The LOA will specify what reasonable course accommodations the student is eligible for and those the instructor should provide. Additional information can be found on the SDS website.

Free Speech and Expression
Absences for Religious Holy Days
Classroom Expectations
Non-discrimination
Sexual Harassment/Misconduct and Supportive Measures
Sharing of Class Recordings (if appropriate)