

Math 4700 – Special Topics in Mathematics: Statistical Inference with R

Lecture Time: 2:00pm – 3:50pm (MW) Location: Knudson Hall 201

Textbook: Casella and Berger, Statistical Inference 2nd Ed.

Instructor: Mei Yin mei.yin@du.edu

Office and Office Hours: Zoom, 10:30am – 12:00pm (TR), or by appointment

Please bring your laptop to the class, as we will be doing real-time coding in R.

Tentative Calendar:

The Week Of	Material Covered
January 5 – January 9	Introduction to R (I)
January 12 – January 16	Introduction to R (II)
January 21 – January 23	Sufficiency Principle of Data Reduction
January 26 – January 30	Likelihood Principle of Data Reduction
February 2 – February 6	Methods of Finding Point Estimators
February 9 – February 13	Methods of Evaluating Point Estimators
February 16 – February 20	Methods of Finding Hypothesis Tests
February 23 – February 27	Methods of Evaluating Hypothesis Tests
March 2 – March 6	Methods of Finding Interval Estimators

March 9 – March 13	Review, Project Presentation
March 16	Project Presentation

Grading: Your final grade for the course will be determined based on a numerical weighted average calculated as follows: **Homework 30% Midterm 30% Term Project 40%.**

Homework: There will be four homework sets, due at the beginning of the class on **Mondays January 19, February 2, February 23, and March 9.**

Midterm: A take-home midterm will be given, with a tentative due date on **Monday, February 16.**

Term Project: The term project can be targeted towards either the theoretical or the applied aspect of statistics and is due on **Wednesday, March 18.**

Students with Disabilities: If you qualify for academic accommodations because of a disability or medical issue, please submit a faculty letter to me from AccessibleDU: Student Disability Services (SDS) in a timely manner so that your needs may be addressed. SDS determines accommodations based on documented disabilities/medical issues. SDS is located in Suite 22 on the lower level of Driscoll South, 303-871-3241. Information is also available online at <https://studentaffairs.du.edu/disability-services-program>.

Honor Code: All work submitted in this course must be your own. You are encouraged to work together on homework, but make sure that working together does not turn into copying another student's answer. For consequences of violating the Academic Misconduct policy, refer to the University of Denver website on the Honor Code (<https://studentaffairs.du.edu/student-rights-responsibilities/honor-code>).

Religious Accommodations: University policy grants students excused absences from class or other organized activities for observance of religious holy days, unless the accommodation would create an undue hardship. Faculty are asked to be responsive to requests when students contact

them **in advance** to request such an excused absence. Students are responsible for completing assignments given during their absence, but should be given an opportunity to make up work missed because of religious observance. Once a student has registered for a class, the student is expected to examine the course syllabus for potential conflicts with holy days and to notify the instructor by the end of the first week of classes of any conflicts that may require an absence (including any required additional preparation/travel time). The student is also expected to remind the faculty member in advance of the missed class, and to make arrangements in advance (with the faculty member) to make up any missed work or in-class material within a reasonable amount of time.

Other: Check the **DU academic calendar** for important dates throughout the quarter: <http://www.du.edu/registrar/calendar/index.html>.