Stat 472:
Statistical Research: Design, Data & Methods
Spring 2021

Course Coordinator:	Aaron Nielsen, Ph.D.	**Email:**	aaron.nielsen@colostate.edu
Sections:	001	**Time:**	(times vary)
Location:	(online)	**Webpage:**	`http://canvas.colostate.edu/`

Co-instructors: Youngseok Song (Alan.Song@colostate.edu), Gray Stanton (Gray.Stanton@colostate.edu

Course credits: 3

Required Software: R (It's free and available at `http://www.r-project.org/`)

Office Hours: By appointment

Prerequisite: Stat 342

Catalog Description: Statistical research skills including data analysis, problem solving, report writing, oral communication, and planning experiments.

Course overview: Students will participate in statistical research projects to replicate or repudiate peer-reviewed statistical studies. This includes but is not limited to: data collection/cleaning, conducting exploratory data analysis, modeling, summarizing and writing scientific reports, and presenting results to an audience.

Homework: Students will be required to complete specific tasks/benchmarks for their projects irregularly throughout the semester. These assignments will be announced in class and posted to Canvas.

Attendance: Students will be required to attend a 30 minute meeting with their instructors each week. Students will be graded on attendance and group participation.

Final Project: Groups of students will complete a final project that requires a 10 page report and 15 minute in-class presentation.

Presentations: All students will be required to present their results to the class at least twice during the semester.

Basis for Final Grade: Your final grade will be based on your exam scores, homework sets, and the final project. The weightings will be as follows:

- Teamwork, attendance, and participation: 30%

- Homework assignments and project updates: 30%

- Final paper and presentation: 40%

Grading Scale: Your course grade will be determined from the following grading scale:

A	92% – 100%	C+	78% – 80%
A-	90% – 92%	C	70% – 78%
B+	88% – 90%	D	60% – 70%
B	82% – 88%	F	0% – 60%
B-	80% – 82%		

Course Policies:

- **Academic Integrity and CSU Honor Pledge:** This course will adhere to the CSU Academic Integrity/Misconduct policy as found in the General Catalog and the Student Conduct Code. Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, I will ask that you affirm the CSU Honor Pledge as part of completing your work in this course. Further information about Academic Integrity is available at CSU's Academic Integrity - Student Resources.

- **Cheating:** includes using unauthorized sources of information and providing or receiving unauthorized assistance on any form of academic work or engaging in any behavior specifically prohibited by the faculty member. In particular, students are not allowed to communicate with others during exams and are not allowed to use online solutions from any source.

- **Online Homework Helpers:** The use of online "homework helper" sites including, but not limited to, Chegg, NoteHall, Quizlet and Koofers is not permitted in this course. Please reach out to your instructor to discuss if a specific service you are thinking about using for this course is acceptable. Use of these types of resources will be considered receiving unauthorized assistance and, therefore, a violation of the student conduct code. Using them may result, at the discretion of the instructor, in a zero for the course, assignment, quiz, or exam. All incidents of this type will be referred to the CSU Student Resolution Center and may be subject to additional University disciplinary action.

- **Late Work Policy:** Online homework may be submitted up to one week late for half credit. No late homework can be submitted after the final exam.

- **Grades of "Incompletes":** I will follow university procedures on "incompletes", i.e., they are only given in situations where unexpected emergencies prevent students from completing the course and the remaining work can be easily finished the following semester. Incomplete work must be finished the next semester or the grade automatically turns into an F.

- **Group Work Policy:** Students are welcome to work together on homework, but note that some WebAssign problems will have different numbers from student to student. You may not use solutions obtained from previous semesters or from online. This is considered academic dishonesty.

- **Students with Disabilities:** The university is committed to providing support for students with disabilities. If you have an accommodation plan, please see me so we can make any arrangements necessary to facilitate your learning.

- **Need Help?** CSU is a community that cares for you. If you are struggling with drugs or alcohol and/or experiencing depression, anxiety, overwhelming stress or thoughts of hurting yourself or others please know there is help available. Counseling Services has trained professionals who can help. Contact 970-491-6053 or go to `http://health.colostate.edu`. If you are concerned about a friend or peer, tell someone by calling 970-491-1350 to discuss your concerns with a professional who can discreetly connect the distressed individual with the proper resources (`http://safety.colostate.edu/tell-someone.aspx`). Rams take care of Rams. Reach out and ask for help if you or someone you know is having a difficult time.

- **COVID:** Important information for students on COVID-19: All students are required to follow public health guidelines in any university space, and are encouraged to continue these practices when off-campus(es). Students also are required to report any COVID-19 symptoms to the university immediately, as well as if they have potentially been exposed or have tested positive at a non-CSU testing location. If you suspect you have symptoms, please fill out the COVID Reporter (`https://covid.colostate.edu/reporter/`). If you have COVID symptoms or know or believe you have been exposed, it is important for the health of yourself and others that you complete the online COVID Reporter. Do not ask your instructor to report for you; if you report to your instructor that you will not attend class due to symptoms or a potential exposure, you are required to also submit those concerns through the COVID Reporter. If you do not have access to the internet to fill out the online COVID-19 Reporter, please call (970)491-4600.

  If you report symptoms or a positive test, your report is submitted to CSU's Public Health Office. You will receive immediate, initial instructions on what to do and then you will also be contacted by phone by a public health official. Based on your specific circumstances, the public health official may:

  - choose to recommend that you be tested and help arrange for a test
  - conduct contact tracing
  - initiate any necessary public health requirements or recommendations and notify you if you need to take any steps If you report a potential exposure, the public health official will help you determine if you are at risk of contracting COVID.

  For the latest information about the University's COVID resources and information, please visit the CSU COVID-19 site (https://covidrecovery.colostate.edu/).

Tentative course schedule:

- Introduction/warm-up data sets (Weeks 1–5), Final project (weeks 5–15)