Stat 472:
Statistical Research: Design, Data & Methods

Spring 2020

Course Coordinator:	Aaron Nielsen, Ph.D.	**Email:**	aaron.nielsen@colostate.edu
Sections:	001	**Time:**	Tuesdays 2:00 – 4:30pm
Location:	Weber 205	**Webpage:**	`http://canvas.colostate.edu/`

Co-instructors: Nehali Mhatre (Nehali.Mhatre@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 Canvs.

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:

- **Attendance:** Group work is essential in this class, so you must not regularly miss class or your grade may suffer. You are responsible for all announcements and syllabus/schedule changes made in class. Please check your email and Canvas frequently for posted examples and announcements.
- **Late Work Policy:** Late homework is not accepted and make-ups are not given for missed exams without prior approval.
- **Extra Credit Policy:** No extra credit is available.
- **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:** Group work is essential to this course, however, students should not share R code with students not in their assigned group.
- **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.

Tentative course schedule:

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