
SP 21 Stat 390-01: Case Studies in Statistics

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Office Hours: TBD
Outreach Hours: TBD

Required Materials

Textbook: We will not use a textbook for the course. Instead, a detailed set of case studies with data will be provided to the students. Students will need to draw upon course materials from previous courses and other resources to research, analyze, and present case studies.

Software: Students may use the statistical software R or SAS throughout the semester. R is a free software package for statistical computing. The R installation files can be found at www.r-project.org and SAS may be accessed using www.sas.com/en_us/software/on-demand-for-academics.html. Several computers around campus have the software installed. Papers and presentations are expected to be in L^AT_EX.

Prerequisite: STAT 316 with a grade of C or better and STAT 318 with a grade of C or better and at least two other 300 level statistics classes with a C or better

Course Aims

Course Description: Students synthesize information across many statistical methods through case studies. For each case study, students must determine the most appropriate approach to answer the researcher's questions using statistics. Students present their analysis and conclusions in a series of written and oral presentations.

Course Objectives: A student completing this course successfully is expected to

- Determine which statistical method is appropriate to address research questions
- Correctly apply statistical methods to address research questions
- Present findings of a statistical analysis in written and oral formats

Student Learning Outcomes: Student learning should include but not be restricted to the following outcomes

- By the end of the course, students should have a working knowledge of R and/or SAS with respect to a variety of statistical methods.
- By the end of the course, students should have a working knowledge of L^AT_EX for typesetting professional papers and presentations.
- By the end of the course, students should be able to identify which statistical procedure is appropriate given a particular setting.

- By the end of the course, students should be able to apply various statistical procedures to data sets using software.
- By the end of the course, students should be able to present statistical finding in oral and written formats.
- By the end of the course, students should be able to critique case studies and formulate alternative solutions to those presented in the case studies.

Course Assessment

Resume (6%): Students will be introduced to L^AT_EX by preparing a resume. The resume must be checked with Career Services and/or the Writing Center.

Job Review (6%): Students will learn how to search for jobs in statistics. Students must identify and describe at least 5 academic postings and at least 5 industry postings that are of personal interest. Then students must write a cover letter for one posting of each type. Cover letters must be checked with Career Services and/or the Writing Center.

Written Reports (56%): Students will be responsible for choosing methods to analyze and report on four case studies. Each written report will constitute 14% of the overall grade. A detailed rubric will be provided.

Oral Presentations (32%): Students will be responsible for presenting results of case study analyses using Beamer. Each presentation will constitute 8% of the overall grade. A detailed rubric will be provided.

Grade Scale

90-100 A	80-86 B	70-76 C	60-66 D
87-89 B+	77-79 C+	67-69 D+	< 60 F

Closing Remarks

Students with Disabilities: Coastal Carolina University is committed to equitable access and inclusion of individuals with disabilities in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Individuals seeking reasonable accommodations should contact **Accessibility & Disability Services** (843-349-2503 or www.coastal.edu/disabilityservices/).

Attendance Policy: Attendance will be taken at every class meeting. Please see the CCU attendance policy in the University Catalog. According to the policy, missing over 25% of classes may result in a grade of F. I am excited for you to be in the class and want you to be there regularly!

Expectations: I believe that expectations should be made clear in advance. They should be fair while holding the student to high standards. This class is not my life, but I strive to make it clear, fair, organized, and put in adequate time to help you succeed. I respect my students as individuals and have the same expectation in return. I understand this class is not your life, but you should treat your work and learning in this class with respect and appropriate effort. I hope we even have fun in this process! Please let me know as soon as you have trouble or questions. I am here for you!

The instructor reserves the right to make changes to this syllabus during the semester.