

College of Charleston
School of Business
DSCI 232.06 - Business Statistics

Professor information

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Class Information

Tuesdays and Thursdays from 4:00 – 5:15 pm

Course Textbook

Anderson, Sweeney, Williams. Essentials of Modern Business Statistics 7th ed. with MindTap.
Don't buy the book before the first day of class.

Course Description

Advanced statistical analysis with applications in business and economics utilizing relevant computer software. Topics include business applications in descriptive and inferential statistics emphasizing selected topics as described in the course objectives section.

Prerequisites

MATH 104 - Elementary Statistics or MATH 250 - Statistical Methods I. MATH 104 or 250 is a pre-requisite for DSCI 232. Before taking this course: all School of Business majors must earn a C- or better in MATH 104 or 250 to continue with a major in the School of Business.

School of Business Learning Goals

- COMMUNICATION SKILLS: Students will demonstrate the ability, via both written and spoken word, to effectively present, critique, and defend ideas in a cogent, persuasive manner.
- QUANTITATIVE FLUENCY: Students will demonstrate competency in logical reasoning and data analysis skills.
- GLOBAL AND CIVIC RESPONSIBILITY: Students will be able to identify and define social, ethical, environmental and economic challenges at local, national and international levels. Students will also be able to integrate knowledge and skills in addressing these issues.
- INTELLECTUAL INNOVATION AND CREATIVITY: Students will be able to demonstrate their resourcefulness and originality in addressing extemporaneous problems.
- SYNTHESIS: Students will demonstrate the ability to integrate knowledge from multiple disciplines incorporating learning from both classroom and non-classroom settings in the completion of complex and comprehensive tasks.

ATTENTION

This class is a pre-requisite for many other classes in the School of Business. Make sure you know how this class is a pre-requisite for your other classes.

Course Objectives

The main objective is to provide students with tools to improve their analytical skills and help them as future professionals to have a better decision-making process in all areas of business. At the end of this course, students will have learned the following analysis:

1. Compute and interpret sample mean and standard deviation
2. Build confidence intervals for the population mean, variance and proportion
3. Test hypotheses about population mean, variance and proportion
4. Test hypotheses comparing two population means/variances/proportions
5. Perform one-way analysis of variance
6. Estimate simple linear regressions
7. Estimate multiple regressions

Teaching Method

Online videos and hands-on exercises. We will use e-learning as a support tools in the course, therefore, students should have the responsibility to learn how to use Excel. Any questions about excel, should be done outside the classroom to avoid distracting the class objectives.

Homework assignments

Homework assignments consist of a list of exercises students should work on to provide opportunity for students to practice statistics and help learn it. Homework assignments are all online version of the textbook through MindTap.

→ LATE HOMEWORK IS ACCEPTED UP TWO DAYS AFTER THE DEADLINE AND HAS A PENALTY OF 20% REDUCTION IN THE ASSIGNMENT GRADE. NO HOMEWORK IS ACCEPTED AFTER TWO DAYS.

How can I be successful in this class?

Here are some guidelines that increase your likelihood of success in this class:

- **Attend all classes.** Business statistics is very challenging, and attending classes provide a great opportunity to learn more.

- **Have total attention in the class.** If you do not pay attention to all details discussed in classes, it will be more difficult for you to solve problems and succeed.

- **Take notes.** This class is intense in the content and I communicate many details through different examples that might not be in the textbook or slides. If you do not take notes, it will be difficult to remember later.

- **Work on homework assignments in few portions every day.** Do not wait until the last few days to work on the homework assignments. Do not work on only one block of time on the homework. Instead, work few portions every day. Statistics is like a language; you have to practice every day to remember. The suggestion is to work 2 hours every day.

- **Read the textbook prior to coming to the class.** There are many terms and new information in every class. If you read the textbook, you will be more prepared to understand the videos.

- **Make use of handouts, videos, and other resources.** I prepare handouts and post link to my videos and other videos to help you summarize and have an overview of the statistical methods. Also, you can make use of tutors available to help you.

Class Policies

Exam Policy

Exams are your opportunity to score points by showing your knowledge, understanding, and skills. The primary purpose of exams is to evaluate your ability to understand and apply statistical tools to solve business problems. These are the guidelines to be followed during exams:

- Exams are closed books.
- Turn off your cellphones and all other electronic devices.
- If a student arrives late to an exam or continues working after time is called, the exam will not be accepted for grading.
- Students are not allowed to use any outside materials or leave the classroom during the exams, unless specifically authorized by the instructor.
- All exams are to be taken at the scheduled times.
- **No make-up exams will be given except for documented emergencies.**

Attendance Policy

Since this is an interactive class with significant student participation, attendance to all class meetings is expected.

Students with more than three unexcused absences will be assigned a WA grade.

Presence and absence will be given for each 1h15min class. Ex.: A student leaving at 7:00pm, after attending class from 5:30pm, will receive one absence. Students missing one entire class will receive two absences.

Important: Do not schedule personal appointments, such as doctor visits or other meetings, during class times.

Non-emergency doctor visits are considered unexcused absences. Students are responsible for all announcements and assignments are made in class and all course material distributed and covered, regardless of their presence or absence for any class.

College of Charleston Honor Code and Academic Integrity

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student's actions are related more to a misunderstanding will be handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student's file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others

having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student's transcript for two years after which the student may petition for the X to be expunged. The F is permanent. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board. Students should be aware that unauthorized collaboration—working together without permission—is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others' exams, fabricating data, and giving unauthorized assistance. Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor. Students can find the complete Honor Code and all related processes in the Student Handbook at <http://studentaffairs.cofc.edu/system/studenthandbook/index.php>

Classroom Behavior

The Classroom Code of Conduct (from the President's Advisory Committee) covers specific principles of civil conduct expected in a college classroom:

- Turn off cell phones and all other electronic devices. Do not use computers for tasks unrelated to the class. Using the internet during class is distracting to the professor and other students.
- Never get late or leave early during class.
- Do not talk with classmates while the professor (or another student) is talking.

Visible and noisy signs of restlessness are rude as well as disruptive to others. (Student Handbook, pp. 58-59)

Oaks

OAKS, including Gradebook, will be used for this course throughout the semester to provide the syllabus and class materials and grades for each assignment, which will be regularly posted.

F2F courses when students are quarantined/isolated due to Covid-19

If one or more students are absent for an extended period of time due to COVID-19 (quarantine or isolation), instructors may, at their discretion, conduct the class exclusively online via OAKS for the duration of student quarantine/isolation, record class lessons to share with students, or choose an alternate accommodation that provides the impacted student(s) with the opportunity to continue in the course. The specific accommodation will vary depending on the number of students affected, the expected duration of their absence, and the needs of the class.

Inclement Weather, Pandemic or Substantial Interruption of Instruction

If in-person classes are suspended, faculty will announce to their students a detailed plan for a change in modality to ensure the continuity of learning. All students must have access to a computer equipped with a web camera, microphone, and Internet access. Resources are available to provide students with these essential tools.

Withdrawal Policy

The professor does not process Instructor Withdrawals for any reason.

Resources

Center for Student Learning:

The Center for Student Learning's (CSL) academic support services provide assistance in study strategies, speaking & writing skills, and course content. Services include tutoring, Supplemental Instruction, study skills appointments, and workshops. Students of all abilities have become more successful using these programs throughout their academic career and the services are available to you at no additional cost. For more information regarding these services please visit the CSL website at <http://csl.cofc.edu> or call (843) 953-5635.

Students with Disabilities

The College will make reasonable accommodations for persons with documented disabilities. Students should apply at the Center for Disability Services / SNAP, located on the first floor of the Lightsey Center, Suite 104. Students approved for accommodations are responsible for notifying me as soon as possible and for contacting me one week before accommodation is needed.

Grading

There will be exams, quizzes, and homework. Grade points are given according to the following distribution:

| Evaluation | Points |
|----------------------|--------|
| Exam 1 | 20 |
| Exam 2 | 25 |
| Final Exam | 30 |
| Three Quizzes | 15 |
| Homework assignments | 10 |
| Total | 100 |

Final grades will be assigned according to the following grading scale:

| Points | Letter Grade | Points | Letter Grade |
|------------|--------------|------------|--------------|
| > 94 | A | 73 - 75.99 | C |
| 90 - 93.99 | A - | 70 - 72.99 | C - |
| 86 - 89.99 | B + | 66 - 69.99 | D + |
| 83 - 85.99 | B | 63 - 65.99 | D |
| 80 - 82.99 | B - | 60 - 62.99 | D - |
| 76 - 79.99 | C + | < 60 | F |

TENTATIVE SCHEDULE

| Month | Day | Topic | Chapters |
|-------|-----|--|--------------|
| Aug | 24 | Mean, median, mode, std dev, variance, z-scores, outliers | 3 |
| Aug | 26 | Mean, median, mode, std dev, variance, z-scores, outliers | 3 |
| Aug | 31 | Continuous Probability Distributions: Normal Distribution | 6 |
| Sept | 2 | Continuous Probability Distributions: Normal Distribution | 6 |
| Sept | 7 | Sample distribution | 7 |
| Sept | 9 | Sample distribution | 7 |
| Sept | 14 | Sample distribution - Quiz I | 7 |
| Sept | 16 | Review | 3, 6 & 7 |
| Sept | 21 | Exam 1 | 3, 6 & 7 |
| Sept | 23 | Interval estimation | 8 |
| Sept | 28 | Interval estimation | 8 |
| Sept | 30 | Hypothesis test (1 population) | 9 |
| Oct | 5 | Hypothesis test (1 population) | 9 |
| Oct | 7 | Hypothesis test (1 population) | 9 |
| Oct | 12 | Hypothesis test (2 populations) | 10 |
| Oct | 14 | Hypothesis test (2 populations) - Quiz II | 10 |
| Oct | 19 | Fall break - no class | 10 |
| Oct | 21 | Review | 8, 9 & 10 |
| Oct | 26 | Exam 2 | 8, 9 & 10 |
| Oct | 28 | Analysis of variance | 13 |
| Oct | 29 | Last day to withdraw from a class with a grade of W | |
| Nov | 2 | Analysis of variance | 13 |
| Nov | 4 | Analysis of variance | 14 |
| Nov | 9 | Simple regression | 14 |
| Nov | 11 | Simple regression | 14 |
| Nov | 16 | Simple regression | 14 |
| Nov | 18 | Multiple regression | 15 |
| Nov | 23 | Multiple regression | 15 |
| Nov | 25 | Thanksgiving - No class | |
| Nov | 30 | Multiple regression - Quiz III | 15 |
| Dec | 2 | Review | 15 |
| Dec | 9 | Final exam - from 3:30 to 5:30pm (Tuesday) | All chapters |