

**College of Charleston**  
**School of Business**  
**DSCI 232-03: Business Statistics**  
**Fall 2021**

**Professor Information**

- **Name:** Dr. Chen-Huei Chou
- **Office:** BCTR 304 (Beatty Center); Zoom meetings are encouraged.
- **Email:** chouc@cofc.edu (Please start with [DSCI 232] in the title field, message without this portion may be ignored or delayed)
- **Office Hours:** TR 8:00 am – 9:25 am; TR 10:50 am – 11:55 am and **by email appointments only.**

**Class Time (Eastern Standard Time)**

- **Time:** TR 9:25 am – 10:40 pm

**Response Times**

Students can expect responses from me as follows:

- **Email:** within 24 hours
- **Assignment and exam feedback:** approximately within 72 hours of submission date

**Course Delivery**

The hybrid format allows self-motivated, task-driven students the flexibility to complete coursework over the Internet. Students must have access to a computer with high-speed Internet access throughout the course. Computer failure/unavailability does not constitute an excuse for not completing assignments/exams by the due dates.

The class will be administered through OAKS, the College's learning management system. The course videos are in MP4 format which requires a compatible app to play over the Internet. The course materials such as PowerPoint slides, Excel files will be available on the OAKS.

**Expectations**

Students are expected to check the course site on OAKS and your e-mail at least 5 days per week to stay current with course work so that you will be aware of any changes or developments in the schedule. You are expected to contact me over e-mail if you have any questions.

**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 such topics as simple and multiple regression, analysis of variance, forecasting, quality control, and nonparametric techniques.

**Prerequisite**

MATH 104 or MATH 250, which covered probability concepts, descriptive statistics, binomial and normal distributions, confidence intervals, and tests of hypotheses. Although knowledge on these topics is expected, we will briefly review the most important topics in class.

## Course Objectives

1. Interpret business data using descriptive statistics techniques, including the use of spreadsheet functions.
2. Apply simple concepts of probability distributions to business problems, solving for statistics (given probabilities) and probabilities (given statistics) for normal, t-Student, Chi-Squared and F distributions.
3. Use statistical tests to make inferences about a population based on a sample.
4. Apply hypothesis testing for one and two populations to test for means and proportions in business applications.
5. Apply ANOVA and goodness of fit for testing for differences among multiple populations in business applications.
6. Apply Chi-Squared tests and regression for testing relationships between variables for business decision-making.

## School of Business Learning Goals

### *Quantitative Fluency:*

Students will demonstrate competency in logical reasoning and data analysis skills.

## Required Software and Hardware

- Reliable fast speed Internet
- A personal computer running Microsoft Windows or Mac OS
- Microsoft Excel 2013, 2016, 2019, Office 365 (**PC version only**) or Excel 2016, 2019, Office 365 (**Mac version; other Mac versions won't be compatible**)
- PowerPoint Reader
- Internet browser and video player
- PDF reader such as Adobe Reader

## Required Textbooks & Materials

- Essentials of Modern Business Statistics with Microsoft Excel. Anderson, Sweeney and Williams. 7th ed. Thomson South; ISBN-13: 9781337669788; ISBN-10: 1337669784  
(There is no need to have access code from the book. Files needed will be posted to OAKS)  
e-book version:  
<https://www.vitalsource.com/products/essentials-of-modern-business-statistics-with-david-r-anderson-dennis-j-v9781337516556>
- The course slides, syllabus, videos, Excel files, and other class materials are available on OAKS.

## Scheduled Exam Times

Exam 1: 9:25 am – 10:40 am EST on September 14 (Tuesday)

Exam 2: 9:25 am – 10:40 am EST on October 12 (Tuesday)

Exam 3: 9:25 am – 10:40 am EST on November 9 (Tuesday)

Exam 4: 9:25 am – 10:40 am EST on December 2 (Thursday)

***Note: You are required to take the exams as scheduled. No makeup or extension (except SNAP accommodation) is allowed in this course.***

**Topics Covered**

1. Introduction. Descriptive Statistics
2. Continuous Probability Distributions: Normal, t-Student, Chi-Squared and F.
3. Sampling Distribution.
4. Interval Estimation.
5. Hypothesis Testing – One Population
6. Hypothesis Testing – Two Populations
7. ANOVA Single Factor
8. Simple Regression
9. Multiple Regression

**EVALUATION PROCEDURES****Grading and Evaluation:**

<b>Activities</b>	<b>Points</b>
Exam 1	18
Exam 2	18
Exam 3	18
Exam 4	18
Assignments	28
<b>Total</b>	<b>100</b>

Note: Excel certification test points may be merged to assignments if it is not feasible. Assignments includes problem-solving questions and Excel exercises.

**Grade cutoff points are:**

<b>Points</b>	<b>Letter Grade</b>	<b>Points</b>	<b>Letter Grade</b>
> 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

I reserve the right to adjust the grading scale down if needed.

## POLICIES AND PROCEDURES

### **OAKS and MyCharleston Usage:**

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.

Grades will be posted on **OAKS** and **MyCharleston**. It is the student's responsibility to ensure that all grades entered are correct. If I have made a mistake, the student has **two weeks** from when the assignment/exam was handed back to notify me of the mistake. Failure to notify me within this time frame will result in the recorded grade becoming permanent.

### **SNAP Students/Special Accommodations/Athletes:**

Any student eligible for and needing accommodations because of a disability is requested to speak with the professor during the first two weeks of class or as soon as the student has been approved for services so that reasonable accommodations can be arranged.

The College will make reasonable accommodations for persons with documented disabilities. Students should apply for services 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.

This College abides by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. If you have a documented disability that may have some impact on your work in this class and for which you may require accommodations, please see an administrator at the Center of Disability Services/SNAP, (843) 953-1431 or me so that such accommodation may be arranged.

For more information, you may visit the disability services website: <http://disabilityservices.cofc.edu/>

Students needing special accommodations should see the professor within the first week of class. If there is a student in this class who has a documented disability and has been approved to receive accommodations through the Center for Disability Services/SNAP (Students Needing Access Parity), please make a reservation to discuss this with me during my office hours. ***SNAP Student should provide the accommodation letter to the professor at least three days before the scheduled exam. No extended time will be given if valid documentation is not received before the exam.***

### **Attendance:**

Students are expected to attend all classes, turn in all work by the due date and take examinations at the times and dates announced. The attendance records collected on the OAKS is for curving purpose. Please refer to the Introduction slides for details.

### **Exam Policy:**

Students are not allowed to access course materials, Internet, and any communication devices including cell phones, tablets, instant messengers, etc. Exams are closed book and to be taken as scheduled by yourself over the OAKS electronically. During the exam, you can load Excel, Word, and calculator applications only. You need to provide steps reaching your final answers. 50% of the assigned points will be taken if steps are not provided. You may use Word/Excel to type your steps. You may also clearly write down your steps. You **SHOULD** upload your **files** to the **OAKS** by the scheduled deadline. No makeup exams will be given except for documented emergencies. **In case of emergency please contact the professor via e-mail by the end of the exam. Technical issues such as Internet loss, malfunctioned computer, etc. are not considered valid emergencies.**

### **Assignment Policy**

It is required to provide your signature page on assignments you will turn in. The individual assignments should be done by yourself. 50% of the assigned points will be taken if steps are not provided. You may use Word/Excel to type your steps. You may also clearly write down your steps and scan/take clear picture of the write-ups. You SHOULD upload your **files** and **signature** page to the OAKS by the scheduled deadline. In case the OAKS folder is closed after scheduled deadline, you should still email the files to me (chouc@cofc.edu) as soon as you can. College of Charleston email received time will be used for making point reduction based on the same criteria listed in the **Exam Policy** section.

### **Questions and Problems:**

You are encouraged to ask questions during class and office hours, we all want to hear your ideas and opinions.

### **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 XXF 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 XX 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/honor-system/studenthandbook/index.php>

### **Academic Support Services—The Center for Student Learning**

The CSL, located on the first floor of the library, offers a wide variety of tutoring and other academic resources that support many courses offered at the College. Services include walk-in tutoring, by appointment tutoring, study strategies appointments, Peer Academic Coaching (PAC), and Supplemental Instruction (SI). All services are described and all lab schedules are posted on the CSL website <http://csl.cofc.edu> , or call 843.953.5635 for information.

### **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.

### **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.

### **Recording of Classes (via ZOOM)**

Class sessions may be recorded via both voice and video recording. By attending and remaining in this class, the student consents to being recorded. Recorded class sessions are for instructional use only and may not be shared with anyone who is not enrolled in the class.

### **TENTATIVE SCHEDULE OF TOPICS**

Below is a schedule of topics. Please note that the schedule may vary if needed. **You will find the most updated schedule in OAKS.**

<b>Module</b>	<b>Week</b>	<b>Date</b>	<b>Day</b>	<b>Topic</b>	<b>Note</b>
Module 1	1	Aug 24	T	Introduction	
	1	Aug 26	R	Descriptive Statistics	1, 2, 3
	2	Aug 31	T	Descriptive Statistics	1, 2, 3
	2	Sep 2	R	Continuous Probability Distributions: Normal Distribution	6.2
	3	Sep 7	T	Continuous Probability Distributions: Normal Distribution	6.2
	3	Sep 9	R	Continuous Probability Distributions: Normal Distribution	6.2
	4	Sep 14	T	Exam 1	1, 2, 3, 6.2
Module 2	4	Sep 16	R	Sampling Distributions Interval Estimation	7 8
	5	Sep 21	T	Sampling Distributions	7

				Interval Estimation	8
	5	Sep 23	R	Sampling Distributions Interval Estimation Hypothesis Tests (1 population)	7 8 9
	6	Sep 28	T	Sampling Distributions Interval Estimation Hypothesis Tests (1 population)	7 8 9
	6	Sep 30	R	Hypothesis Tests (1 population)	9
	7	Oct 5	T	Hypothesis Tests (1 population)	9
	7	Oct 7	R	Hypothesis Tests (1 population)	9
	8	Oct 12	T	Exam 2	7, 8, 9
Module 3	8	Oct 14	R	Hypothesis Tests (2 populations)	10.1,10.2,10.3
	9	Oct 19	T	Fall Break (No Class)	
	9	Oct 21	R	Hypothesis Tests (2 populations) ANOVA	10.1,10.2,10.3 10.4 and 10.5
	10	Oct 26	T	Hypothesis Tests (2 populations) ANOVA	10.1,10.2,10.3 10.4 and 10.5
Oct 29: Last day to withdraw from classes with a grade of "W"					
Module 3	10	Oct 28	R	ANOVA	10.4 and 10.5
	11	Nov 2	T	ANOVA	10.4 and 10.5
	11	Nov 4	R	Simple Regression	12
	12	Nov 9	T	Exam 3	10
Module 4	12	Nov 11	R	Simple Regression Multiple Regression	12 13
	13	Nov 16	T	Simple Regression Multiple Regression	12 13
	13	Nov 18	R	Multiple Regression	13
	14	Nov 23	T	Multiple Regression	13
	14	Nov 25	R	Thanksgiving Holiday (No Class)	
	15	Nov 30	T	Multiple Regression	13
	15	Dec 2	R	Exam 4	12, 13

\* The professor reserves the right to do any necessary change to this schedule.