BUAD 202: Statistics for Business and Economics
Professor Hamilton, Fall 2023

Instructor Info

Office: Robins School of Business 250
Email: thamilt2@richmond.edu
Office Hours: Tue. 10:30 – 11:30
                           Thu. 10:30 – 11:30

Course Materials

TEXTBOOK: *Introductory Statistics.* **Openstax**, Barbara Illowsky and Susan Dean

-   This textbook is available for free online (pdf, online book, iBooks, Kindle)

    https://openstax.org/details/books/introductory-statistics

-   Hardcopy is also available for *purchase* on Amazon.

LAPTOP: We will often work with data together during class. You will need a laptop for this. Please let me know if you do not have a laptop that you can bring to class. You must also have access to Microsoft Excel, which will be used in class and for graded assignments. For work outside of class, this software is available in the Business School computer lab and on most University computers.

Course Objectives

The objective of this course is to familiarize you with statistical techniques that can be applied to a variety of settings, including business and economic problems. After establishing a foundation of basic statistics, we will focus on multiple populations, analysis of variance, and statistical inference. It is expected that you will spend approximately 10-14 hours each week on this course, including attending lectures and completing assignments outside of the classroom.

A good statistician combines strong technical skills with the art of problem-solving based on theory and intuition. This course will involve a modest degree of mathematical rigor to build the necessary theoretical foundation. In addition, hands-on exercises will require students to master the application and interpretation of statistical techniques.

Robins School of Business Learning Objectives

O1.1: Students will produce solutions to business problems using appropriate analysis.

O1.2: Students will identify core issues, key stakeholders and their perspectives, and evaluate and apply evidence in support of a coherent position or recommendation.

O2.2: Students will write a cogent analysis of a business or economic situation.

O3.1: Students will demonstrate an ability to work in teams and collaborate with others.

Course Expectations

Students are expected to take an active part in this course, including being prepared to discuss text book material in class and take part in class exercises. This requires ***keeping up with assigned reading***, homework, and practice problems. To be successful in this course you should **expect to devote 10 to 14 hours each week**, including lectures, studying, and preparing assignments.

This course will focus on theory and application. Both are important. You must be ready to think about abstract concepts, pay attention to nuanced technical details, and apply what you learn in an original way.

The building-block nature of this course requires consistent study habits. For that reason I expect you to attend all lectures, on time, and to have read assigned readings before class. If you are having trouble with material covered in previous classes, please do not hesitate to come to me for help.

Grading

Grades for this course will be determined through a combination of homework, an Excel portfolio, class participation, quizzes, and exams. Homework will be assigned consistently throughout the semester in addition to a dataset project that involves applications in Excel. These assignments will be turned in on Monday morning or submitted electronically on Sunday night. There will be a short quiz at the beginning of class (almost) every Monday.

Components of the course grade are weighted as follows:

14%	Homework
10%	Dataset Project
5%	Class Participation
1%	Monday Presentation
8%	Quizzes
40%	Equally divided between two Midterm Exams
22%	COMPREHENSIVE Final Exam

Tentative exam dates are listed below. Only serious reasons will be considered for a makeup quiz or examination and I will only consider allowing a makeup for planned University activities if I am notified in advance. I will not accept any homework after the due date without prior approval. Exams, quizzes and homework that are missed without approval will result in a score of zero.

Honor Policy

Students are expected to abide by the University of Richmond's Honor Code:

https://studentdevelopment.richmond.edu/student-handbook/honor/pdfs/statutes.pdf

AI Policy

It is prohibited to use any Artificial Intelligence programs/software/applications to complete work for this class. If you are using any online resources, you should never find yourself typing anywhere other than in a Google.com search bar.

Other Resources

Blackboard Course: http://blackboard.richmond.edu

Academic Skills Center: http://asc.richmond.edu

Quizzes

There will be a short quiz at the beginning of class *every* Monday.

Monday Presentation

You will be assigned to do one Monday Presentation with an assigned partner. I will assign a short problem on Wednesday and you will be responsible for presenting the solution and explanation to the class the following Monday. Assigned dates are available on Blackboard.

Course Outline

Introduction to Statistics	Chapter 1
Distributions; measures of central tendency	2.2, 2.5
Finish measures of location; measures of variability	2.3, 2.7
Shape	2.6
Probability	3.1-3.4
Introduction to distributions	4.1-4.2; 5.1-5.2
Normal probability distribution	6.1-6.4
Exam 1	
Sampling distributions and the Central Limit Theorem	7.1-7.5
Confidence intervals	8.1-8.6
Hypothesis testing: single mean or proportion	9.1-9.5
Hypothesis testing: two samples	10.1-10.5
Hypothesis testing: χ^2 tests	11.1-11.6
Exam 2	
ANOVA	13.1-13.5
Least squares (univariate regression)	12.1-12.9

Exam Dates

Midterm I: Wednesday, October 4
Midterm II: Wednesday, November 8

Final Exam

Section 04: Friday, December 15, 9:00am-12:00pm
Section 05: Thursday, December 14, 9:00am-12:00pm