USCMarshall

BUAD 312g – Statistics and Data Science for Business
Syllabus: Fall 2023

Professor: Feng Chen
Office Hours: via ZOOM, Tuesday 9:30 am to 11:30 am or by appoinment
https://usc.zoom.us/j/4934373203
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Section	Time	Days
14927	10:00am – 11:50am	Monday, Wednesday
14928	12:00pm - 1:50pm	Monday, Wednesday
14929	2:00pm - 3:50pm	Monday, Wednesday

TA: Spencer Wang (MSBA student)
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Office Hours: via ZOOM, 2pm to 4pm, Friday , https://usc.zoom.us/j/8368792048

"When every business has free and ubiquitous data, the ability to understand it and extract value from it... leads to intelligence, and the intelligent business is the successful business, regardless of its size. Data is the sword of the 21st century, those who wield it well, the Samurai."

—Jonathan Rosenberg, advisor to Google founder Larry Page.

Course Description

Harnessing the power of data has become an essential skill to be successful in business. This course is designed to give you the tools for "wielding" data effectively. Data in its raw form is usually just gigabytes of numbers and letters. How do we go from piles of numbers to useful information that can inform our business decision making? How do we communicate these findings and critically evaluate the claims made by our business associates? Doing well in this class will strategically position you in a job market that is desperate to hire business minds that can think and speak in data.

This is a faster-moving, more advanced version of BUAD 310 and is recommended for students with basic statistical foundation. The prerequisites are the same (nothing more than high school algebra), but the pace will be faster and expectations will be higher. The goal of this course is to help you develop statistical thinking skills as a data-savvy manager. To that end, we will study several basic statistical topics, focusing on how you, yourself, can apply them in practice, interpret their output and build intuition.

Learning Objectives

At the end of this course, you will be able to:

1. Produce effective visualizations and data summaries, transforming raw data files into human understandable pieces of information.
2. Use statistical models to generate predictions about unseen data.
3. Use statistical models to make inferences about the underlying processes generating the data.
4. Identify the proper statistical tool given a business question and a data set.
5. Provide simple yet precise explanations of the purpose of the most common statistical tools.
6. Interpret the results of a statistical analysis as a basis for decision making.

7. Collaborate effectively to use statistical analysis to address business challenges.
8. Communicate your statistical analyses logically and persuasively
9. Use R along the entire statistical pipeline—from data import and wrangling to data exploration and visualization, to analysis and the preparation of reproducible reports.
10. Understand the ethical guidelines for statistical practice.

See Appendix A for how these course-level objectives support the six Marshall undergraduate program learning goals.

This course is designed to fulfill the ***GE-F** (Quantitative Reasoning)* core literacy requirement, with an emphasis on empirical analysis. In particular,2 we will (1) "understand the use and meaning of summary statistics of data sets," (2) "learn how to apply basic axioms of probability to analysis in environments characterized by uncertainty," (3) "understand the distinction between causation and correlation," and (4) "learn how to use methods of statistical inference to answer questions about natural, social, or artificial processes, systems, or phenomena, as well as to evaluate the success of a formal model in characterizing a given process, system, or phenomenon." Appendix B provides a mapping of the ten course learning objectives to the learning objectives of the GE-F (Quantitative Reasoning) core literacy category.

Required Materials

All course materials are available online:

1. Textbook: Statistical Inference via Data Science: A moderndive into R & the tidyverse
   by Chester Ismay and Albert Y. Kim.
2. Software: R and RStudio
   (Please find detail installation guide in chapter 1.1 of our textbook.)
3. Online videos and assignments: DataCamp
   Please join our Datacamp course using the following link (Be sure to sign up with your usc.edu account.)
   https://www.datacamp.com/groups/shared_links/fd4a7d26a5e72b9ea9e58e983405fc3d52f8f2f3d9253b6b9dd0be81848b2df8
4. Online Platform: Labs, projects, announcements, and other course materials will be distributed through Blackboard.

Total cost of materials: $0.

Prerequisites

Similar to BUAD310, no mathematical background beyond high school algebra will be assumed. No prior programming experience is required. However, a foundational grasp of basic statistics is strongly advised. Drawing from previous semesters, the majority of students possess prior familiarity with basic statistics. Prospective students should recognize that this course will pose challenges, particularly for those without prior exposure to basic statistics. Nonetheless, they should approach the opportunity with enthusiasm, as they comprehend that tackling greater challenges yields greater rewards.

How is this different from BUAD 310?

This is a more advanced alternative to BUAD 310 for students excited to learn the state-of-the-art tools for data science. Both classes teach students the fundamentals of statistics. BUAD 312 emphasizes the powerful combination of computation and statistics. Instead of Excel, students will learn basic programming in the R language. The R programming language has become one of the most common tools for data scientists working in business. As much as possible, BUAD 312 will put contemporary data sets in the spotlight. These will stimulate curiosity and motivate us to learn new techniques for making sense of it all.

Course Notes

We use Blackboard for all assignments, course materials, and announcements. Please check Blackboard and your email daily. If you would like hard copies of any course materials, it will be your responsibility to print them out prior to class.

Working with software is an integral part of this course. Your quizzes and assignments (see below) require using this software. Thus, it is very important that you attend and actively participate in software exercises during class sessions.

Discussing assignments with a partner or study-group is permitted and highly encouraged. Your peers are now and will always be your best resource to learn. **However, each student is required to prepare, write-up, and submit his or her own solutions independently, including computer work.** Collaboration of any sort on quizzes and exams is prohibited **and will result in a zero on that quiz/exam and the appropriate University-level authorities to be notified**. See also the Marshall Guidelines on Academic Integrity below.

For technical support please see:

- **USC Systems** (Blackboard, USC Login, MyUSC, USC Gmail, GoogleApps)
  For assistance with your USC login or other USC systems, please call +1 (213) 740-5555 or email Consult@usc.edu. They are open Mon – Fri, 9:30am – 5pm and weekends from 8am - 5pm (all Pacific time).

- **Zoom Video Web Conferencing System**
  For assistance using Zoom, go to Zoom Support Page. You may also call +1 (888) 799-9666 ext. 2. They are available 24/7.

- **Marshall Systems** (MyMarshall, Marshall Outlook email)
  For assistance with Marshall systems you can call +1 (213) 740-3000 Mon-Fri 8am-6pm (Pacific), email HelpDesk@marshall.usc,edu, or use our self-help service portal as shown below. The portal allows you to get immediate assistance by searching for the information you need. You can also use it to chat with a technician or input a request. To access the service portal, follow these steps:
  - On a computer or mobile device, go to MyMarshall Home Page and click the "**Help**" link on the upper right.
  - Log in using your Marshall username and password.
    (If you don't know your Marshall login please follow the onscreen instructions pertaining to login issues)

If your computer does not have Microsoft Word, Office 365 package is available to you free of charge and allows you to install Word, Excel, PowerPoint, Outlook, OneNote, Publisher, and Access on up to 5 PCs or Macs and Office apps on other mobile devices including tablets. Office 365 also includes unlimited cloud storage on OneDrive. To download Office 365 log into your student (University) email through a web browser, choose Settings (top right corner), and select software. If you have further questions or need help with the software, please contact the USC ITS service portal (https://itservices.usc.edu/).

Grading Policies

Grading policies and practices for the University are described below.
https://arr.usc.edu/services/grades/gradinghandbook/gradingpolicies.html#Definitions%20of%20Grades%20and%20Marks

Letter Grade	Definition of Grades
A	Work of **excellent** quality; represents **Exceptional** work; a grade of "**A**" will be assigned for outstanding work only.
B	Work of **good** quality.
C	Work of **fair** quality for **undergraduate credit.**
D	Work of **minimum passing** quality for **undergraduate credit**.
F	**F = Failure** This grade is awarded to any undergraduate student failing to meet the minimum standards for passing the course. The grade of F indicates that the student failed at the end of the semester or was doing failing work and stopped attending the course after the twelfth week of the semester.

Your course grade is calculated using the following weight scheme:

Participation	10%
Labs (all count)	15%
4 Quizzes (Lowest will be dropped.)	35%
Midterm project	15%
Final project	25%
Total	**100%**

Target GPA of BUAD312 (all sections together) is 3.3 ± 0.09 (B+). Letter grades will not be given for individual assignments and exam.

Assignments

Attendance

This is a residential class, and **in-person attendance is expected**. Unless students provide an accommodation letter from USC OSAS requiring remote attendance, there is no option to attend class via Zoom.

Class Participation

In-class participation is a critical part of this course's learning experience. A key learning outcome for this course is developing the ability to effectively explain data analysis and communicate recommendations based on this analysis. Students will offer their opinions in group settings many times in their careers; thus, class participation serves to prepare students for this business experience. Consequently, class participation is essential.

Cold calling will take place to encourage active participation and to gain multiple perspectives and points of view, thus lending itself to the richness of the learning experience. While some students are far more comfortable than others with class participation, all students should make an effort to contribute meaningfully to every class. Throughout the semester there will be in-class assignments on which we will work together in class. Students will submit in-class assignments through Blackboard. Please check the in-class due dates with your instructor.

Your participation is assessed mainly on the completion and quality of your class work, contribution, and insights.

Data Camp assignments (optional)

Data Camp chapters contain videos and practice problems that serves as excellent supplement to the course material. It is highly recommended that you watch the videos and work on the exercise. You will have unlimited attempts.

LAB

The main purpose of the lab is to practice all the skills and review the concepts learned in the module. During the lab sessions, we will go through some guided practices. One or two questions may be assigned at the end for students to wrap up the lab by themselves. Please check Lab due dates with your instructor.

Quizzes: 4 Quizzes

The quizzes will be open book and without Internet access (except Blackboard), but they WILL require the use of RStudio and Blackboard. No make-up quizzes are offered. Quizzes must be taken on the assigned date and in the section in which students are registered in. OSAS students will receive schedule notice the week before. The lowest quiz grade will be dropped.

Midterm Project

Students will be assigned to a project team in the project kickoff session. Project details and grading details will be announced and explain also in the kickoff session. Students will have one week to work on the project. All teams are encouraged to sign up for a project progress check meeting with the instructor. Each project progress check meeting will last about 10 to 15 minutes and will be held during the project progress check session. All meetings will be held on ZOOM.

All team members are expected to present in the midterm project presentation. Each team shall prepare a 10-minute presentation summarizing the key findings.

Final Project

Like the midterm project, project guidelines and team assignments will be announced. Final project due date and time is consistent with the final exam schedule posted by the university.

Final project will be cumulative. All teams will have the amount of same time to work on the final project. All teams must work only with their own team members. Any suspicion of cheating will be reported and investigated by USC. Please see the "Academic Integrity and Conduct" section below for further details.

Students must attend all quizzes at the indicated times and dates above. If you foresee a conflict, you must contact the instructor within the first three weeks of the semester to explore alternative options, to be determined by the faculty. No rescheduling of tests will be allowed after the first three weeks of class. The only exception is a "documented medical emergency," for which the student must provide all of the following documentation by the time of the exam: (1) A signed doctor's note, with the name and phone number of the medical professional verifying the medical emergency; (2) An email from the student's Marshall advisor; (3) An email from a USC Support and Advocacy advisor (see "Support Systems" below). For all other reasons of missing a quiz or an exam, including travels for non-emergencies, interviews, adverse traffic conditions, or forgetfulness about exam time, the student will not be allowed to reschedule, and missing a quiz or an exam will result in a zero for the quiz or the exam.

Assignment Submission Policy

All assignments must be turned in via Blackboard prior to the due date listed in this syllabus. Specifically,

- Please plan ahead as the internet might break down unexpectedly if you wait until the last minute.
- Assignments are accepted through **Blackboard** based on instructions. Please **DO NOT** email me your assignments.
- **Any assignment turned in late for any reasons except medical emergency, even if by only a few seconds, will NOT be accepted.**

Late additions to the class should meet with their instructor <u>within TWO weeks</u> of adding the class to make arrangements for completing missed previous work.

Policy on AI tools

In this course, I encourage you to use artificial intelligence (AI)-powered programs to help you with assignments that indicate the permitted use of AI. You should also be aware that AI text generation tools may present incorrect information, biased responses, and incomplete analyses; thus, they are not yet prepared to produce text that meets the standards of this course. To adhere to our university values, you must cite any AI-generated material (e.g., text, images, etc.) included or referenced in your work and provide the prompts used to generate the content. Using an AI tool to generate content without proper attribution will be treated as plagiarism and reported to the Office of Academic Integrity. Please review the instructions in each assignment for more details on how and when to use AI Generators for your submissions.

- **Quizzes**
  Quizzes in this course are considered 'closed book,' so employing AI technology during a quiz constitutes the same form of academic dishonesty as using other unauthorized materials. While it may be tempting to utilize AI technology for quiz preparation, it's important to recognize that such usage should complement studying notes and assigned readings, potentially providing valuable insights. However, it's crucial to acknowledge that AI tools may sometimes provide misleading information. Words often assume different meanings across various academic disciplines. Coupled with the term 'hallucination,' this can lead to outputs that do not accurately reflect the material covered in class and readings.
- **Assignments and Projects**.
  To ensure that students can work with increasingly powerful technology of the kind that they will need to use in industry while still maintaining "due diligence" in their own research and analysis, the following guidelines have been provided:
  - You may use AI tools to generate potential ideas that would be integrated into your plan or strategy. However:
    1. You must give credit to ChatGPT or other AI tool even for ideas that you have paraphrased and edited.
    2. All writing must be in your own words. Your report may not include direct output from an AI tool, even if this put in quotation marks. You must write the relevant ideas in your own words, editing significantly to integrate insight from other research and analysis.
    3. You must articulate your reasoning in what you are adapting from AI output, documenting independent sources that have confirmed, augmented, and/or clarified the perspective offered by AI agents.
  - Knowing that many algorithms have been found-often unintentionally-to present biases in output that may or may not be readily evident on the surface, it is your responsibility to:
    1. Monitor your queries, watching for inadvertent wording that could potentially introduce implicit assumptions related to gender, ethnicity, culture, and other variables underlying the diversity within the U.S. and across the world.
    2. Scrutinize output, looking for biases that may be "hidden" in output.
    3. Examine the sources of data that appear underlie AI output, looking for any ideological orientation or vested interest of the producers.
    4. Take measures not to introduce, through the wording of queries and data content used in the formulation of questions, material that might contribute to added bias in the ongoing learning algorithms and data used with existing ones.

MARSHALL GUIDELINES AND USC POLICIES

Add/Drop Process

BUAD 312 will remain in open enrollment (R-clearance) through the Add deadline. If there is an open seat, you can add the class using Web Registration. If the class is full, you will need to continue checking Web Registration or the Schedule of Classes (clas-ses.usc.edu) to see if a space becomes available. Students who do not attend the first two class sessions (for classes that meet twice per week) or the first-class meeting (for classes that meet once per week) may be dropped from the course. There are no formal wait lists for Marshall undergraduate courses, and professors cannot add students or increase the course capacity. If all sections of the course are full, you can add your name to an interest list by contacting the Office of Undergraduate Advising & Student Affairs; if new seats or sections are added, students on the interest list will be notified.

Use of Recordings

Pursuant to the USC Student Handbook (www.usc.edu/scampus, Part B, 11.12), students may not record a university class without the express permission of the instructor and announcement to the class. In addition, students may not distribute or use notes or recordings based on University classes or lectures without the express permission of the instructor for purposes other than personal or class-related group study by individuals registered for the class. This restriction on unauthorized use applies to all information that is distributed or displayed for use in relationship to the class.

Open Expression and Respect for All

An important goal of the educational experience at USC Marshall is to be exposed to and discuss diverse, thought-provoking, and sometimes controversial ideas that challenge one's beliefs. In this course we will support the values articulated in the USC Marshall "Open Expression Statement."

USC Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on Research and Scholarship Misconduct.

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course

instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org
Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault
Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086
eeotix.usc.edu
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
usc-advocate.symplicity.com/care_report
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

The Office of Student Accessibility Services (OSAS) - (213) 740-0776
osas.usc.edu
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.
USC Campus Support and Intervention - (213) 821-4710
campussupport.usc.edu
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity, Equity and Inclusion - (213) 740-2101
diversity.usc.edu
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
dps.usc.edu, emergency.usc.edu
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call
dps.usc.edu
Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC)
ombuds.usc.edu

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

Occupational Therapy Faculty Practice - (323) 442-3340 or otfp@med.usc.edu
chan.usc.edu/otfp
Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.

Emergency Preparedness/Course Continuity

In case of a declared emergency if travel to campus is not feasible, the *USC Emergency Information* web site (http://emergency.usc.edu/) will provide safety and other information, including electronic means by which instructors will conduct class using a combination of USC's Blackboard learning management system (blackboard.usc.edu), teleconferencing, and other technologies.

TENTATIVE COURSE PLAN

Week	Session	Date	Weekday	Topics	Readings	Labs	DataCamp assignments (Optional)	Test
1	1	21-Aug	M	Course introduction. Syllabus.	Syllabus, 1.1			
	2	23-Aug	W	R, Rstudio, Packages Descriptive statistics Effective visualization of data and the grammar of graphics	1.2 - 1.4, Appendix A.1		Intro to Tidy #1 and #2	
2	3	28-Aug	M		2 - 2.5			
	4	30-Aug	W		2.6-2.8			
3	5	4-Sep	M	Labor Day, university holiday.				
	6	6-Sep	W	**Lab#1_Data Visualization**		Lab#1		
4	7	11-Sep	M	Data wrangling _ Random variables, probabilities, and life with tydiverse	3 - 3.3, 3.4 - 3.6, 3.8, Appendix A.3		Intro to Tidy #3 and #4	
	8	13-Sep	W	**Lab#2_Data Wrangling**		Lab#2		
5	**9**	**18-Sep**	**M**	Correlation and covariance Basic regression Multiple regression	5 - 5.3.1		Modeling #1 and #2	**Quiz #1**
	10	20-Sep	W		5.3.2 - 5.4, 6.1 Appendix A.2			
6	11	25-Sep	M		6.2 - 6.3		Modeling #3	
	12	27-Sep	W		6.4			
7	13	2-Oct	M	**Lab#3_Regression**		Lab#3		
	14	**4-Oct**	**W**	Midterm project kickoff				**Quiz #2**
8	15	9-Oct	M	Project progress check (ZOOM)	Project proposal due before class			
	16	11-Oct	W	**Midterm Project Presentation**				
9	17	16-Oct	M	Sampling Bootstrapping and Confidence Interval, Normal distribution	7 - 7.3		Sampling #1	
	18	18-Oct	W		7.4 - 7.6			
10	19	23-Oct	M		8 - 8.3			
	20	25-Oct	W		8.4 - 8.7			
11	21	30-Oct	M	**Lab#4_Sampling, Confidence**		Lab#4		
	22	**1-Nov**	**W**	Hypothesis Testing Inference for Regression	9-9.3		Hypothesis testing #1	**Quiz #3**
12	23	6-Nov	M		9.4-9.5			
	24	8-Nov	W		9.6, Appendix B			
13	25	13-Nov	M		10 - 10.2			
	26	15-Nov	W		10.3 - 10.5.2			
14	27	20-Nov	M	**Lab#5_Hypothesis Testing**		Lab#5		
	28	22-Nov	W	Thanksgiving Break!				
15	**29**	**27-Nov**	**M**	Data ethics				**Quiz #4**
	30	29-Nov	W	Final review, Final project kickoff				
Final project will be released in class on 11/29/2023 **Final project submission due: 4pm, 12/09/2023**								

USC Marshall

APPENDIX I
How BUAD312g Contributes to Student Achievement of Marshall's Six Undergraduate Program Learning Goals

A BUAD 312 and Marshall's Six Undergraduate Program Learning Goals

Marshall program learning goal	Course objectives that support this goal
1. **Our graduates will demonstrate critical thinking skills so as to become future-oriented decision makers, problem solvers and innovators.** Specifically, students will: 1.1 Students will understand the concepts of critical thinking, entrepreneurial thinking and creative thinking as drivers of innovative ideas (not explicit for this course). 1.2 Critically analyze concepts, theories and processes by stating them in their own words, understanding key components, identifying assumptions, indicating how they are similar to and different from others and translating them to the real world. 1.3 Be effective at gathering, storing, and using qualitative and quantitative data and at using analytical tools and frameworks to understand and solve business problems. 1.4 Demonstrate the ability to anticipate, identify and solve business problems. They will be able to identify and assess central problems, identify and evaluate potential solutions, and translate a chosen solution to an implementation plan that considers future contingencies.	1–6,8
2. **Our graduates will develop people and leadership skills to promote their effectiveness as business managers and leaders in the 21st century's evolving work and organizational structures.** Specifically, students will: 2.1 Students will recognize, understand and analyze the roles, responsibilities and behaviors of effective managers and leaders in diverse business contexts e.g., functionally diverse, culturally diverse, geographically diverse, etc. 2.2 Students will understand factors that contribute to effective teamwork including how to elicit, manage and leverage diverse perspectives and competencies. 2.3 Students will recognize, understand, and analyze the motivations and behaviors of stakeholders inside and outside organizations (e.g., teams, departments, consumers, investors, auditors)	N/A
3. **Our graduates will be effective communicators to facilitate information flow in organizational, social, and intercultural contexts.** Specifically, students will: 3.1 Identify and assess diverse personal and organizational communication goals and audience information needs. 3.2 Understand individual and group communications patterns and dynamics in organizations and other professional contexts. 3.3 Demonstrate an ability to gather and disseminate information and communicate it clearly, logically, and persuasively in professional contexts.	1,5,6,7,8
4. **Our graduates will demonstrate ethical reasoning skills, understand social, civic, and professional responsibilities and aspire to add value to society.** Specifically, students will: 4.1 Understand professional codes of conduct. 4.2 Recognize ethical challenges in business situations and assess appropriate courses of action.	10
5. **Our graduates will develop a global business perspective. They will understand how local, regional, and international markets, and economic, social and cultural issues impact business decisions so as to anticipate new opportunities in any marketplace.** Specifically, students will: 5.1 Understand how local, regional and global markets interact and are impacted by economic, social and cultural factors. 5.2 Understand that stakeholders, stakeholder interests, business environments (legal, regulatory, competitor) and business practices vary across regions of the world.	N/A
6. **Our graduates will understand types of markets and key business areas and their interaction to effectively manage different types of enterprises.** Specifically, students will: 6.1 Demonstrate foundational knowledge of core business disciplines, including business analytics and business economics. 6.2 Understand the interrelationships between functional areas of business so as to develop a general perspective on business management. 6.3 Apply theories, models, and frameworks to analyze relevant markets (e.g. product, capital, commodity, factor and labor markets). 6.4 Show the ability to utilize technologies (e.g., spreadsheets, databases, software) relevant to contemporary business practices.	1–10

B BUAD 312 and GE-F category

This syllabus meets the learning objectives of critical thinking, logical integrity, and application as defined in the USC General Education Program requirement document of 2017. Below is a mapping showing how this course's learning objectives fulfill the learning objectives of the GE-F (Quantitative Reasoning) core literacy category.

Quantitative Reasoning Learning Objectives[3]	**Course objectives that support this goal**
1. **Critical Thinking:** Students will learn how to use a set of formal tools (e.g., logical or statistical inference, probability, or mathematical analysis) to pose and evaluate hypotheses, claims, questions, or problems within a given (formal) mode of thought.	2,3,4,6
2. **Logical Integrity:** Students will be able to understand the logical structure of a given formal system, to distinguish between its assumptions and implications.	3,5,6
3. **Application:** Students will be able to identify useful and specific applications of the formal systems they study.	4,6,7