BUAD 310g – Applied Business Statistics

Syllabus – Spring 2023

Professor:	Dr. Paromita Dubey	**Class:**	JFF LL105
Office:	Bridge Hall 401P	**Discussion**	JFF 331
		Office Hours:	M 3:10-3:50 PM (JFF LL 105)
			W 12:00-1:30 PM (JFF 239)
			& by appointments (link below)
Email:	paromita@marshall.usc.edu		https://calendly.com/paromita_buad310/buad-310-office-hour-slot

Course Description

In this course, we will focus on learning various statistical techniques and their applications that will assist you in making business decisions. The primary objective of this course is to enable students to perform and understand statistical analysis of data, with the view of being able to critically evaluate statistical reports or findings. You will learn to think critically about how statistics is used by others and how it impacts your day-to-day life and career. No mathematical background beyond high school algebra is required for an understanding of the material.

Course Learning Objectives

You will explore and describe data, examine sampling distributions, make estimations, test hypotheses, perform simple and multiple regression analysis, and build models using extensive software applications both independently and collaboratively.

These applications will guide you to:
1. Explain the concepts of descriptive statistics and use sample statistics to make inferences about population characteristics
2. Recognize different models of statistical processes such as hypothesis testing and linear and multiple regression
3. Explain statistical processes and choose which process to use for data analysis applications
4. Interpret statistical results as a basis for decision making
5. Use applicable statistics software
6. Collaborate effectively to use statistical analysis to address business challenges
7. Communicate your interpretation of the results of statistical analysis logically and persuasively
8. Understand the ethical guidelines for statistical practice
9. Be able to use Excel functions and features to competently analyze data

These course level objectives support the six Marshall Program Learning Goals to varying degrees. Details may be found in the Appendix of this syllabus.

Required Materials

1. The course textbook *Applied Statistics in Business and Economics* (7th Edition) by David Doane and Lori Seward, is available at the bookstore. You can purchase a hard copy at the bookstore or an electronic version of the textbook. After you have purchased a book, you must register with McGraw-Hill Connect, which is a website provided by the publisher.

2. **Each student has to register with McGraw-Hill's Connect** in order to have access to the homework, which will be administered online. Registration with Connect requires an

access code, which you can either purchase online, or get automatically when you buy a new textbook at the USC bookstore. More details are provided on page 7 below.

Prerequisites and/or Recommended Preparation:
No mathematical background beyond high school algebra is required.

Course Notes:
The slides for the course and other handouts will be posted on our course BUAD 310 Blackboard folder before class. If you would like hard copies of the slides, it will be your responsibility to print them out. Please check the Blackboard site and your email daily for class preparation materials or instructions.

Software:
For the discussions/application sessions, students are required to bring a laptop with Microsoft Excel software. Mac users need to have either the Mac version of Excel 2016 or they can use the PC version by installing Boot Camp (free from Apple) - or other Windows emulation software for Mac - and Windows, or by using the Marshall Virtual Lab. Students can take advantage of the free version of Office 365 that USC provides to students, which includes MS Excel 365 The free Microsoft USC Office Suite can be downloaded from http://itservices.usc.edu/officestudents/.
In addition, the Analysis ToolPak add-in is also required, which can be accessed in the PC environment by clicking on File/Options/Add-ins/Go, checking Analysis ToolPak and clicking OK. The procedure is similar for Macs. In addition to the above, all students have access to ExcelNow!, an Excel tutorial that is an add-in that will plug into your version of Excel.

ASSIGNMENTS AND GRADING DETAIL
Your final grade will be determined as follows:

Component of Grade	% of Grade
Homework (Connect) *	10.0%
Application Exercises **	10.0%
Application Exam	20.0%
Midterm Exam	20.0%
Final Exam	30.0%
Pre-lecture and In-class Quiz/Participation***	5.0%
Excel Proficiency****	5.0%

* There are 11 homework assignments, each based on a maximum score of 100% if the assignment is submitted before the due date and time. Late submissions will be accepted, but there will be a deduction of 5% for each day a submission is late. The best 10 scores out of 11 will be used to calculate the average for this component of the course grade.

** There are 11 weeks when application exercises will be due. Late submissions will not be accepted. The two lowest scores will be dropped when calculating the average for this component of the grade. While accuracy will count, grades will be more a reflection of effort put in than accuracy of the answers.

*** Students may be asked to view videos, complete a quiz or review assigned materials in advance of the lecture or discussion These are calculated as full credit or no credit.

**** Students will be given access to the ExcelNow! tutorial which covers over 160 features and functions of Excel. Each topic has a Read and Practice sheet, a short video and a self-grading quiz. Students are asked to take the quiz for 30 of the topics in ExcelNow! Unlimited tries are allowed. The composite score for all quizzes will be used for this component of the grade. The due date for uploading the quizzes gradebook is end-of-day, April 28th, the final day of instructions for Spring 2023. No extensions will be granted.

The weights listed above will be used to calculate your overall score for the class. *Class participation during the lectures may increase your overall score by a bonus of up to 1% particularly for students on the borderline of grade levels.*

Final grades represent how you perform in the class relative to other students. Two items are considered when assigning final grades:
1. Your total weighted score as out of all the available points for all assignments and exams.
2. Your ranking among all students in the class

Class Attendance & Participation:

You are expected to attend all classes. In addition to providing expanded explanations and examples of important statistical analysis concepts, the application sections also present you with the opportunity to pose questions.

The applications section of the class makes up 30% of the course grade. The 30% is composed of two parts: (1) There will be 11 application exercises. The lowest two grades will be dropped and the average of the remaining nine scores will count for 10% of the course grade. (2) There will be one exam, done individually, accounting for 20% of the course grade.

I am happy to go over a concept multiple times. If you feel uneasy bringing up your questions in class, take advantage of the many opportunities to speak with me one-on-one. I am accessible by email, and will be more than happy to speak with you during office hours. Note: if your question requires a conversation rather than a short answer, email is not the best way to go – please talk to me during office hours, and I will be happy to answer your question.

Homework:

You will access your assignments and submit the answers online, using McGraw-Hill's Connect. There will be eleven homework assignments. Due dates for each homework assignment are in the tentative course schedule on page 7. An assignment that is submitted after the due date will have a reduced maximum score as indicated in the footnote on the previous page.

Application Exercises:

You will work collaboratively using Excel for data-analysis and problem solving in the application section of this course. The exercises are constructed to lead you through key topics introduced in lectures and reading. Your conclusions must explain the quantitative findings through a real-world business perspective. Group discussions will provide the opportunity to practice the professional collaboration required by employers. There are no make-up sessions for any missed applied session. You must attend only your designated session. You must attend at least nine of the eleven sessions when an application exercise is due. There is no need for a calculator in the application sessions since you will be able to use Excel, which is much more powerful and efficient than a calculator and less prone to errors. Thus, calculators are not allowed in the application sessions.

Midterm Exam, Applications Exam and Final Exam:

The midterm exam will be given in the lecture section of the course on the date announced in the course schedule (page 11). **If you miss the Midterm for any reason, the grade % will be made up based on the Final Exam Score.** No make-ups of tests will be given. The midterm grade component will be replaced by the final grade component if the final score is greater than the midterm score.

There will also be one individual exam covering the work done in your application sessions. The Application Exam will be in a similar format to the weekly problem solving applications but done

individually. No make-ups of tests will be given. **You will receive a grade of zero for the Application Exam** unless you have a written excuse from your doctor or the University.

The final examination will take place on **TBD for all BUAD 310 sessions.** Note that it is an **exception final**, as it does **not** take place at the regularly listed time. The final exam is comprehensive (this is inevitable in a Statistics course) but greater emphasis will be given to the material taught later in the semester. You **cannot** be exempted from this final under any circumstances. **The final exam will NOT be given at any other time.**

Note that according to the USC Office of Academic Records and Registrar, "*No student in a course with a final examination is permitted to omit the final examination or take the final examination prior to its scheduled date, and no instructor is authorized to permit a student to do so. No student is allowed to re-take a final examination or do extra work in a course after the semester has ended for purposes of improving his or her grade.*"

Collaboration Policy:
Discussion of homework problems is permitted and encouraged; however, each student is required to prepare and submit his or her solutions, including computer work, underlinedindependently.
Collaboration of any sort on tests and exams is prohibited and will result in a 0 on that exam.
I reserve the right to bring any potential cheating issues to the administration for further penalties.

Add/Drop Process:
Please note that the last day to register and add classes is Friday, January 27. The last day to drop a class without a mark of "W" is also January 27 and receive a tuition refund. The last day to drop a class without a mark of "W" is February 24. For more information, visit
https://classes.usc.edu/term-20231/calendar/

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 Section 11, Behavior Violating University Standards https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct.

Honor Code. Students are responsible for obtaining, reading, and understanding the Honor Code System handbook. Students who are found to have violated the Code will be subject to disciplinary action as described in the handbook. For more specific information, please refer to the Student Honor Code System handbook, available in class or from the receptionist in ACC 101.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity http://equity.usc.edu or to the Department of Public Safety http://adminopsnet.usc.edu/department/department-public-safety. This is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. The Center for Women and Men http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage http://sarc.usc.edu describes reporting options and other resources.

Support Systems:
Students whose primary language is not English should check with the American Language Institute http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students.

The Office of Student Accessibility Services (OSAS) - (213) 740-3959
https://osas.usc.edu/
Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this course and require accommodations, you must first register with the Office of *Student Accessibility Services* (https://osas.usc.edu/). OSAS provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with OSAS each semester. A letter of verification for approved accommodations can be obtained from OSAS. Please be sure the letter is delivered to me as early in the semester as possible. OSAS is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-3959. Email: sasfrntd@usc.edu

Marshall Academic Resources:
The Marshall Office of Undergraduate Advising & Student Affairs offers free weekly Core Review Sessions, along with additional "Cracking the Core" workshops, as a supplement to classroom instruction. Marshall Peer Academic Leaders (PALs) assist students in understanding and clarifying difficult concepts covered in class that week, but core review sessions are effective only if students regularly attend class and actively engage in the process of thinking critically about the course content. Marshall Academic Resources are available for core courses that are traditionally challenging in the business major curriculum. For more information, please visit the Marshall Undergrad Advising and Student Affairs website.

Counseling and Mental Health - (213) 740-9355– 24/7 on call
https://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
Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. http://www.suicidepreventionlifeline.org

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

Sexual Assault Resource Center
For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: http://sarc.usc.edu/

Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298
equity.usc.edu, titleix.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
https://usc-advocate.symplicity.com/care_report/
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

USC Campus Support and Intervention - (213) 821-4710
https://uscsa.usc.edu/
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (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.

Class Notes Policy

Notes or recordings made by students based on a university class or lecture may only be made for purposes of individual or group study, or for other non-commercial purposes that reasonably arise from the student's membership in the class or attendance at the university. This restriction also applies to any information distributed, disseminated or in any way displayed for use in relationship to the class, whether obtained in class, via email or otherwise on the Internet, or via any other medium. Actions in violation of this policy constitute a violation of the Student Conduct Code, and may subject an individual or entity to university discipline and/or legal proceedings.

Classroom Zoom Policy (if and when applicable)

Zoom is the platform used for all online sessions and online office hours. A link and instructions to join the Zoom sessions will be posted in the Blackboard Course Pages. For more information about Zoom, go to: Zoom Support Tutorials

1. Class attendance and participation is important in developing a coherent view of the materials covered in the course. Unless accommodated as described in (b) below, attendance and active participation is expected at the synchronous Zoom class sessions.

a. Students are expected to have cameras on during the synchronous Zoom sessions, and preferably use headsets or earphones to ensure the best audio quality. *Please advise me if you have circumstances under which you will not be able to meet these expectations.*

b. For students who are located in a time zone where the synchronous class sessions or exams fall outside the window of 8 a.m. to 10 p.m. in your local time zone, please contact me. You will not be penalized for not attending the live Zoom class sessions. The Zoom sessions will be recorded and posted on Blackboard, and you will be responsible for watching the recorded sessions. Exams and other synchronous assessments will be scheduled for students to be able to complete the assessment between 8 a.m. and 10 p.m. in your local time zone.

c. [*If applicable*] In addition, for any student who does not attend the Zoom session live, you will be required to complete the following assignment as an alternate method of contribution to the class: [*insert; or see one sample below*]

2. During synchronous Zoom sessions, the following netiquette is expected, as if you were in a physical classroom.

    a. Please do:
        i. Log into class early or promptly
        ii. Arrange to attend class where there is a reliable internet connection and without distractions
        iii. Dress respectfully. Video conference business meetings are and will be the norm, so practice your professional telepresence.
        iv. If you use a virtual background, please keep it respectfully professional.
        v. Display both your first and last name during video conferencing and synchronous class meetings.
        vi. Respectfully minimize distractions by muting and or turning off video if necessary and when appropriate.
        vii. Engage in appropriate tone and language with instructors and classmates.

    b. Please try not to:
        i. Engage in a simultaneous activity not related to the class.
        ii. Interact with persons who are not part of the class during the class session.
        iii. Leave frequently or not be on camera for extended periods of time.
        iv. Have other persons or pets in view of the camera.
        v. Use all CAPITAL LETTERS in emails or discussion board postings. This is considered "shouting" and is seen as impolite or aggressive.
        vi. Use more than one punctuation mark, this is also considered aggressive!!!!

3. All Zoom sessions will be recorded and posted in the Blackboard Course pages.

Class Technology Requirements (when applicable)

The following equipment and system requirements are recommended to successfully participate in this online course:

- Computer with webcam
- Earphones or headset
- Reliable (preferably high speed) Internet connection
- Current operating system for Windows or Mac
- Current browser
    o Google Chrome

- o Firefox
- o Internet Explorer (not recommended)
- o Safari (Mac)

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 (**MarshallTALK)
  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:
  - o On a computer or mobile device, go to MyMarshall Home Page and click the "**Help**" link on the upper right.
  - o 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.

Emergency Preparedness/Course Continuity

If an officially declared emergency makes travel to campus infeasible, USC Emergency Information (http://emergency.usc.edu/) will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

McGraw-Hill's Connect

McGraw Hill's Connect is an online learning system where you can:
- Access two electronic versions of your textbook – a static eText that you can annotate and highlight, and an adaptive reading experience with personalized quizzes, called *SmartBook.*
- Complete homework assignments and practice assignments directly from your textbook, complete with tutorial videos, guides, and additional resources.
- Study more efficiently with a personalized study plan and exercises that match your book.

Before You Begin:
To register for Connect, you need:

- ☑ **A Connect student access code** (packaged with your new text if you purchase a hard copy at the bookstore, or available for purchase with a major credit card when registering with McGraw-Hill online)
- ☑ **Access to your BUAD 310 course in Blackboard**
- ☑ **A valid email address**

Student Registration:

Create your McGraw-Hill Connect Account and Complete Your Registration. **Student Registration:**
Go to https://connect.mheducation.com/class/p-dubey-olc-aligned-course-configuration-2023
Registration options
1. **Register on the McGraw-Hill site by going to the Blackboard section and clicking on Content and then the Homework Assignments folder.**
   Click on any of the assignments and then Go to My Connect Section. This will take you to a page where you can create your McGraw-Hill Connect Account and complete your Registration. This will give you a Connect license, which will give you an eBook and enable you to do the homework. In addition, you will also have the option to purchase a three-hole punched loose-leaf version of the text for $39.
2. **Get a two-week trial Connect access**. Use option 1. above and select the trial option. This is a good option if you are not sure you are going to stay enrolled in the class.

Once your registration is complete, a **Confirmation** page appears. You will also receive this information by email. You are now ready to access your resources!

To access your Connect assignments:

- Click on any Connect assignment from within your Blackboard course (they will appear when assigned).
- Connect will automatically open directly to that assignment. Once you complete an assignment and select "Submit," your grade will automatically flow to your Blackboard grade book.
- *Always access your Connect assignments through Blackboard! If you access directly through McGraw-Hill, your grades may not sync over.*

Call: (800) 331-5094

Email & Chat: www.mhhe.com/support
Monday - Thursday ● 24 hours
Friday ● Until 6:00 PM
Saturday ● 7 AM - 5 PM
Sunday ● Until 9:00 PM
(All times Pacific)

Training & Tutorials:
connectstudentsuccess.com

connect®

student registration information

course

BUAD 310g: Applied Business Statistics

instructor

Paromita Dubey

section

OLC-Aligned Course Configuration 2023

registration dates

01/09/23 - 05/11/23

online registration instructions
Go to the following web address and click the **"register now"** button.

https://connect.mheducation.com/class/p-dubey-olc-aligned-course-configuration-2023

This is a unique address for
OLC-Aligned Course Configuration 2023

Having trouble registering?
Get help here: https://bit.ly/StudentRegistration

TENTATIVE COURSE SCHEDULE – BUAD 310

(**Test dates are set**, but topics and homework due dates may be modified)

Week	Date	Topics	Book Chapters [Doane & Stewart]	Exclusions	Homework Assigned	Due Dates
1	1/9	Introduction	1.1 through 1.5	Geometric mean, Midrange, Mean Absolute Deviation, Chebyshev Theorem, Method of medians, Fences, Midhinge		
1	1/11	Descriptive Statistics	2.1,2.2,3.2-3.9, 4.1-4.5			
2	1/16	Descriptive Statistics (continued)	**MLK HOLIDAY**			
2	1/18	Correlation & Covariance	4.6		HW#1	1/27
3	1/23	Probability: Basic Concepts	5.1-5.5	Odds of Event		
3	1/25	Probability (continued)			HW#2	2/3
4	1/30	Random Variables	6.1,6.2, 6.8	Using Tables: Appendix A		
4	2/2	Binomial Distribution	6.4	Normal Areas from Appendices C-1 & C-3	HW#3	2/10
5	2/6	Uniform and Normal Distributions	7.1-7.4			
5	2/8	Sampling Distributions, Central Limit Theorem	8.1,8.2	Efficiency & Consistency Estimators	HW#4	2/17
6	2/13	Confidence Interval for Mean (σ known)	8.3			
6	2/15	Confidence Interval for Mean (σ unknown)	8.4	Using Appendix D	HW#5	2/24
7	2/20	Confidence Interval for a Proportion	8.5	Rule of 3		
7	2/22	Hypothesis Testing	9.1	Power of test, Relationship between α and β	HW#6	3/3
8	2/27	Hypothesis Testing (continued)	9.2			
8	2/29	Testing a Mean, Testing a Proportion	9.3-9.6	Small samples and non-normality	HW#7	3/10
9	3/6	Review for Midterm Exam		Case 3: Unknown Variances Assumed Unequal		
9	3/8	MIDTERM EXAM				
10	3/13	SPRING RECESS				
10	3/15	SPRING RECESS				
11	3/20	Comparing two sample means	10.3, 10.4	3-Way Tables and Higher, GOF Tests for other distributions, Data Generating Situations, Mixtures : A problem, Eyeball Test		
11	3/22	Chi-Square Test for Independence/Goodness of fit	15.1, 15.2		HW#8	3/31
12	3/27	Simple Regression: OLS Coefficients	12.1-12.4, 12.6, 12.8	Test for Significant Correlation using Student's T, Critical Vale for Correlation Coefficient		
12	3/29	Simple Regression: ANOVA Table			HW#9	4/7
13	4/3	Simple Regression: Transformation & Diagnostics	13.1-13.8			
13	4/5	Multiple Regression		Autocorrelation, Unusual Observations	HW#10	4/14
14	4/10	Multiple Regression (continued)				
14	4/12	Multiple Regression (continued)	13.9		HW#11	4/21
15	4/17	Multiple Regression (continued)		Only Stepwise and Best Subsets		
15	4/19	APPLICATION EXAM (in Lecture)				
15	4/24	Multiple Regression (continued)				
15	4/26	Review for the Final				
Final Exam		TBD by University (between May 3-11)				

The schedule above shows the topics covered each week in lecture and the corresponding reading assignments from the text book.   The sections in the reading assignments include some topics that you are **not** responsible for. These topics are indicated in the Exclusions column. The schedule for the Application (discussion) sessions is on the next page. The schedule of lectures might be revised slightly during the semester, but the dates for the Midterm, Application and Final exams are fixed.

The schedule of Application (discussion) sessions is shown below.

Week #	Week of	TOPIC	
1	1/9	Excel Tutorial	
2	1/16	Application Problem Set 1	
3	1/23	Application Problem Set 2	
4	1/30	Application Problem Set 3	
5	2/6	Application Problem Set 4	
6	2/13	Application Problem Set 5	
7	2/20	Application Problem Set 6	
8	2/27	Application Problem Set 7	
9	3/6	Mid-Term Exam week: No Discussion	
10	3/13	Spring Break	
11	3/20	Application Problem Set 8	
12	3/27	Application Problem Set 9	
12	4/3	Application Problem Set 10	
12	4/10	Application Problem Set 11	
14	4/17	Application Exam	
15	4/23	Review for Final	

APPENDIX I
How BUAD310 Applied Business Statistics Contributes to Student Achievement of Marshall's Six Undergraduate Program Learning Goals

Goal	Marshall Program Learning Goal	BUAD310 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.Explain the concepts of descriptive statistics and use sample statistics to make inferences about population characteristics 2.Recognize different models of statistical processes such as hypothesis testing and linear and multiple regression 3.Explain statistical processes and choose which process to use for particular data analysis applications 4.Interpret statistical results as a basis for decision making 5.Use applicable statistics software 6.Collaborate effectively to use statistical analysis to address business challenges 8.Become a very proficient user of Excel
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)	6.Collaborate effectively to use statistical analysis to address business challenges
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.	7.Communicate your interpretation of the results of statistical analysis logically and persuasively

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.	**N/A**
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). 61.4 Show the ability to utilize technologies (e.g., spreadsheets, databases, software) relevant to contemporary business practices.	1.Explain the concepts of descriptive statistics and use sample statistics to make inferences about population characteristics 2.Recognize different models of statistical processes such as hypothesis testing and linear and multiple regression 3.Explain statistical processes and choose which process to use for particular data analysis applications 4.Interpret statistical results as a basis for decision making 5.Use applicable statistics software 6.Collaborate effectively to use statistical analysis to address business challenges 7.Become a proficient user of Excel