



GSBA-545: Data Driven Decision Making, Fall 2019

Instructor: Dawn Porter
Class Time: Mondays, 12:30pm – 1:50pm*
Office Hours: Mondays **after class from 2:00pm – 3:00pm** and by appointment
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COURSE DESCRIPTION

Data Driven Decision Making will teach students to become more savvy business professionals through quantitative analysis. After this course, students will be able to think quantitatively and properly interpret data-oriented statements. We will cover fundamental statistical techniques in a managerial setting, featuring examples and concrete exercises from various business and non-business settings. Statistical topics include effective use of numerical and graphical summaries, estimation and confidence intervals, hypothesis testing, regression and time series. The important ‘big picture’ goal of this course is to think about the process of decision making under uncertainty, a necessary skill in all business professions.

COURSE OBJECTIVES

The primary objectives of the course are for you to:

1. Become fluent in the use and understanding of statistical terminology.
2. Develop statistical reasoning and subsequent decision-making skills.
3. Develop an application-oriented understanding of statistical inference and regression analysis.
4. Develop the ability to draw statistical insights from data and understand business applications.

COURSE MATERIALS

Stine & Foster, *Statistics for Business: Decision Making and Analysis*, 3rd edition, Pearson Publishing (S&F).

I will also be posting supplementary course materials and slides to Blackboard prior to each session. The syllabus and schedule below list the readings in each of the source materials corresponding to each class session. The S&F text should be used as a reference and a source of problems to work to ensure that you understand the concepts and methods. The data sets used in class and for assignments will also be posted electronically on Blackboard.

* Please note that for the *first* week of the term, our class will be at 12:30pm on **Tuesday, August 27th**.

COURSE INFORMATION: GRADING, ASSIGNMENTS, AND SCHEDULE

GRADING:

The following percentage breakdowns will be used for the Data Driven Decision Making GSBA 545 course:

	Percent
5 Group Homework Assignments (5% each)	25
Midterm Exam	25
Final Exam	35
Final Group Regression Project	15
Total	100

ATTENDANCE & PARTICIPATION

Students are expected to attend all class sessions. Class participation is strongly encouraged.

GROUP HOMEWORK ASSIGNMENTS

Written homework is crucial to the learning process in a quantitative class, so I will assign 5 group homework assignments based on the lecture material and slides. Each assignment will be posted on Blackboard well in advance of its due date and must be submitted by the beginning of class on the date indicated in the Course Schedule. Late assignments will not be accepted. Please submit your completed work directly to Blackboard; you should indicate clearly how you obtained your solution and make sure that you have given a valid explanation. Output without commentary are not adequate for full credit. The solutions to the homework problems will be available through Blackboard after the due date of the assignment.

EXAMS

There will be 2 exams for this course. The **Midterm Exam** is scheduled for **Monday, October 21st** and will be taken in class. I will inform you when the date for the in-class **Final Exam** has been set. For each of the tests, I will provide you with a Statistics Formula Sheet, attached to the exam, which will include all the formulas we use in class, and any tables you might need. A copy of this document is posted in Blackboard for your reference. **NO MAKE-UPS OF EXAMS WILL BE GIVEN.** You will receive a grade of zero for a missed exam unless you have a written excuse from your doctor or the University.

Any calculator that can calculate square roots and natural log calculations is sufficient for our class, but you may not store any course-related material on it. No other electronic device is permitted during a quiz or exam.

GROUP REGRESSION PROJECT

You will be required to carry out a final group regression project, due on the day of the Final Exam. You will need to use either Excel or another statistical software package, such as JMP, to carry out the analysis for this project. You will be responsible for obtaining your own data for the project, but I will post suggested websites and sources for various types of datasets in case you need them. Details on format, content and grading will be distributed separately.

COURSE CALENDAR/READINGS/CLASS SESSIONS

Week	Date	Topic	Reading	Due
1	8/27 [†]	Introduction & Descriptive Statistics	S&F, Chs 1.1 – 1.2, 2.2, 3, 4, 6.1	
2	9/02	NO CLASS – LABOR DAY		
3	9/09	Descriptive Statistics	S&F, Chs 1.1 – 1.2, 2.2, 3, 4, 6.1	
4	9/16	Probability Distributions & Discrete Data	S&F, Chs 3, 4, 6.1, 9	HW 1
5	9/23	Normal Distribution	S&F, Chs 9, 10.1, 10.2, 10.4, 12	
6	9/30	Correlations & Portfolio Analysis	S&F, Chs 10.1 – 10.4	HW 2
7	10/07	Sampling Distributions	S&F, Chs 13.1, 13.2, 14.1, 15	
8	10/14	Estimation & Intervals	S&F, Chs 13.1, 13.2, 14.1, 15	HW 3
9	10/21	MIDTERM		MIDTERM
10	10/28	Inference & Hypothesis Testing	S&F, Ch 16	
11	11/4	Categorical Data Analysis	S&F, Chs 3.1, 3.2, 18.1, 18.2	HW 4
12	11/11	Simple Linear Regression I & II	S&F, Chs 19, 21, 23	
13	11/18	Multiple Linear Regression I	S&F, Chs 23, 24, 25	
14	11/25	Multiple Linear Regression II	S&F, Chs 23, 24, 25	HW 5
15	12/02	Multiple Linear Regression III/Review	S&F, Chs 23, 24, 25	
		FINAL EXAM: Friday, 12/13/19, 11am – 1pm		Group Project

[†] Reminder: Class on the first week will be held on **Tuesday, August 27th** instead of the usual Monday time.

STATEMENT OF ACADEMIC CONDUCT AND SUPPORT SYSTEMS

USC seeks to maintain an optimal learning environment. Students are expected to submit original work. They have an obligation both to protect their own work from misuse and to avoid using another's work as their own. All students are expected to understand and abide by the principles of academic honesty outlined in the University Student Conduct Code (see University Governance, Section 11.00) of SCampus (www.usc.edu/scampus or <http://scampus.usc.edu>). The recommended sanctions for academic integrity violations can be found in Appendix A of the Student Conduct Code.

Students with Disabilities:

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 Disability Services and Programs (www.usc.edu/disability). DSP 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 Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to your TA) as early in the semester as possible. DSP 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) 740-0776. Email: ability@usc.edu.

Support Systems:

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

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 & Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

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)/Title IX compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

Student Support & Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

Diversity at USC – <https://diversity.usc.edu/> Tabs for Events, Programs and Training, Task Force (including representatives for each school), Chronology, Participate, Resources for Students