UCLA Anderson School of Management

MGMT 218 – TOOLS AND ANALYSIS FOR BUSINESS STRATEGY

Spring 2022 – 4 Units

Course Syllabus (ver. 03/20/22)

Instructor Information

Faculty of Record:	Professor Mariko Sakakibara
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Office location:	Cornell Hall, D-509
Office hours:	Wednesdays 3:30pm – 4:30pm and by appointment
Teaching Assistant	Yiyang Zeng
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Office hours:	Tuesdays 5:00pm – 6:00pm

Course meeting times and location

Course Day & Time:	Section 1: Tuesdays 1:00pm – 3:50pm Section 2: Tuesdays 7:10pm – 10:00pm
Course Location:	Gold Hall, B-313
Course Site:	Section 1: https://bruinlearn.ucla.edu/courses/131903 Section 2: https://bruinlearn.ucla.edu/courses/131904

Pre-requisites/ Co-requisites

There are no course pre-requisites, but this course is a strategy elective and we build upon what you learned in 420: Business Strategy and 402: Data and Decisions courses. No prior quantitative experience is necessary for this course.

Course Description

The analytical revolution is changing the process of business decision-making in profound ways. The classic skill sets are not being replaced: fundamental disciplinary knowledge, strategic thinking ability, industry depth, and effective communication skills are still the hallmarks of effective business decision-making. But these classic skills need to be enhanced to navigate the data revolution. Quantitative reasoning and statistical analysis are rapidly becoming indispensable business disciplinary knowledge and inputs for strategy formulation. Likewise, depth of industry knowledge progressively requires knowing the type of data that is generated in your industry, how to access it, and what it means. Finally, effective communication in business increasingly relies on visual design and

information display toolkits. To harness data analytics as a competitive advantage for firms and individual careers, it cannot be outsourced.

The principal objective of this class is to increase your level of comfort with the design, execution, and interpretation of data analysis that can meaningfully inform business strategy formulation. The pedagogical approach is firmly rooted in learning by doing. We will use a variety of real-world examples to gain practice with quantitative methods that can be deployed in business settings to analyze the underlying predictors and causes of firm success.

The most important part of this course is how to answer a strategic question using data, which requires you to think about how to convert your question to the form that can be analyzed. Therefore analytical thinking is an essential part of this course.

Course Objectives

At the end of the course, students will be able to:

1. Take any (meaningful!) data set your boss/client gives you and turn that into strategic insight.
2. Learn how to use R to answer strategic questions.
3. Gain familiarity with all stages of the work flow associated with analyzing and presenting quantitative results.
4. Become more comfortable with the consumption of data analysis. Even if you don't go on to a career in data analysis, you need to know when others are adding value and when they are shoveling garbage at you.

Course Materials

Required:

- There is no textbook for this course. All the necessary materials for this course will be posted on the course site.
- Download R and Rstudio (in this order) prior to the first class.
  - To download R, go to https://www.r-project.org/, choose "CRAN" from the menu on the left, choose the site you want, and choose Windows or Mac to proceed.
  - To download Rstudio, go to https://www.rstudio.com/products/rstudio/download/, choose "Rstudio Desktop Free" and choose your OS type.
- All the necessary R commands for the course will be provided in the "R command" note, which will be posted before each class and explained in the class. In addition, you can use useful websites such as https://www.statmethods.net/ for reference.

Course Outline

Module/ Week	Date	Weekly Title & Key Topics	Pre-Class Activities	Individual Weekly Concluding Quiz Due	Group Assignments Due
1	03/29/22	• Principles of analytical design, R warm-up	• If you are not familiar with R, watch the posted videos and practice before the class	• Saturday, 04/02/22, 11:59pm Pacific	•
2	04/05/22	• Data credibility, distributions	• Read the group assignment: Apple and be familiar with QGIS • Form your group and fill the group sign-up sheet by 4/6	• Saturday, 04/09/22, 11:59pm Pacific	•
3	04/12/22	• Regression analysis and interpretation	•	• Saturday, 04/16/22, 11:59pm Pacific	• Group assignment: Apple Due: Tuesday, 04/12/22, 8am Pacific
4	04/19/22	• Hypothesis testing	•	• Saturday, 04/23/22, 11:59pm Pacific	•
5	04/26/22	• Model building	•	• Saturday, 04/30/22, 11:59pm Pacific	• Group assignment: Airlines Due: Tuesday, 04/26/22, 8am Pacific
6	05/03/22	• Model building	•	• Saturday, 05/07/22, 11:59pm Pacific	•
7	05/10/22	• Predictive modeling	•	• Saturday, 05/14/22, 11:59pm Pacific	• Group assignment: Campaign Spending Due: Tuesday, 05/10/22, 8am Pacific
8	05/17/22	• Binary dependent variables, experimental design	•	• Saturday, 05/21/22, 11:59pm Pacific	•
9	05/24/22	• Locational data analysis, benchmarking	• Download the datasets before coming to the class, and be ready to use QGIS in class	• Saturday, 05/28/22, 11:59pm Pacific	• Group assignment: Arrival Delays Due: Tuesday, 05/24/22, 8am Pacific
10	05/31/22	• Panel data analysis, course review	•	• Saturday, 06/04/22, 11:59pm Pacific	•
Finals (week 11)	06/07/22	• Take-home final exam (will be posted on 06/07/22 and due on the same day)	•	•	• Due: 5 hours after you start the exam

Evaluation and Grading

Required Assignments and Weighted Percentages

Your final grade in the course will be based on a combination of both individual and group work. The evaluation is based on:

Assignments	% of Grade
Group Assignment: Apple	10%
Group Assignment: Airlines	10%
Group Assignment: Campaign Spending	10%
Group Assignment: Arrival Delays	10%
Individual Weekly Pass/Fail Concluding Quizzes	10%
Individual Take-home Final Exam	50%
Total	**100%**

Grades

Your overall course grade will be determined by how your performance ranks in comparison with other students in the class according to the grade distribution model for elective courses at Anderson.

Assignment Descriptions

This is a clinical course. Learning by doing is the best way to become both a producer and consumer of data analysis. The assignments are designed to give you tangible experience implementing tools and interpreting results. The following area descriptions of your required assignments for this course. Specific instructions and submission information are detailed on the course site.

Group Assignments

There will be four group assignments. Form your group and fill the "group sign-up sheet" by April 6. The group should consist of 3-4 students (5 is allowed but 6 is not allowed). If you have difficulties forming a group, please contact our TA Yiyang Zeng who serves as a facilitator. The details of the assignments will be posted on the course site. The submission deadline will be at 8am of the due date, so please make sure to submit on time.

Individual Weekly Pass/Fail Concluding Quizzes

Weekly concluding quizzes will be posted on each week's module. The purpose is to keep you motivated and engaged. You will receive "Pass" as long as you try. "Fail" will be given if you do not submit your answer by the deadline (Saturday, 11:59pm Pacific of each week), write "I don't know" or something irrelevant to the question.

Take-home Final Exam, Tuesday, June 7, 2022

The final exam will be available on the course site, beginning at 9:00am Pacific on Tuesday, June 7, 2022, You can be anywhere in the world to take the exam but you need to be able to access the course site. You can choose any five-hour window as long as your starting time falls between 9:00am and 9:59pm Pacific on June 7, 2022. You cannot see the exam before you start. Your five-hour time will start ticking when you start the exam. You don't need five hours to complete the exam, but five hours are given so that time is not your constraint. You will receive questions and accompanying data to analyze. This is an open-slide, open-note exam. The exam is an individual exam and you cannot communicate with anybody during the exam. You will need to create one PDF file as your answer and submit on the course site.

Anderson and Course Policies

Honor Code

The **UCLA Anderson Honor Code** will apply at all times, and we expect you to strictly adhere to this policy: https://www.anderson.ucla.edu/documents/areas/adm/web/AndersonHonorCode.pdf

Name cards and seating

Students are required to display a name card in all classes. Students are also encouraged to sit in the same seat (or the same area) for each class from week 2 onwards.

Netiquette

The written language has many advantages: more opportunity for reasoned thought, more ability to go in-depth, and more time to think through an issue before posting a comment. However, written communication also has certain disadvantages, such a lack of the face-to-face signaling that occurs through body language, intonation, pausing, facial expressions, and gestures. As a result, please be aware of the possibility of miscommunication and compose your comments in a positive, supportive, and constructive manner.

UCLA Policies

Attendance

We follow the UCLA policy which states in-person learning is the norm this quarter.

Code of Conduct

All participants in the course are bound by the **UCLA Student Conduct Code:** (https://deanofstudents.ucla.edu/individual-student-code)

Use of Mobile Devices

Any disruption of a class due to the audible beeping or use of mobile devices is treated as a violation of Section 102.13 of the **UCLA Student Conduct Code**, and can result in sanctions up to and including suspension or dismissal. The sound on mobile devices must be turned off while in the classroom. (https://registrar.ucla.edu/registration-classes/enrollment-policies/class-policies/use-of-mobile-devices)

Academic Integrity

UCLA is an institution of learning, research, and scholarship predicated on the existence of an environment of honesty and integrity. As members of the academic community, instructors, students, and administrative officials are all responsible for maintaining this environment. It is essential that all members of the academic community practice academic honesty and integrity and accept individual responsibility for their work. Academic misconduct is unacceptable and will not be tolerated in this course. Cheating, forgery, dishonest conduct, plagiarism, and collusion in academic misconduct erode the University's educational, research, and social roles.

Students who knowingly or intentionally conduct or help another student engage in acts that violate UCLA's expectations of academic integrity will be subject to disciplinary action and referred to the Dean of Students' Office.

Please familiarize yourself with **UCLA's Academic Integrity Policy:** https://www.deanofstudents.ucla.edu/Academic-Integrity. Speak to your instructor if you have any questions about what is and is not allowed in this course.

COVID Policies

Students must adhere to the current campus directives related to COVID-19 mitigation, and refusal to do so may result in the student being asked to leave the classroom or referred to the **UCLA Office of Student Conduct**.

Disability Services

UCLA is committed to providing a barrier-free environment for persons with documented disabilities. If you are already registered with the Center for Accessible Education (CAE), please request your Letter of Accommodation in the Student Portal. If you are seeking registration with the CAE, please submit your request for accommodation via the CAE website. Students with disabilities requiring academic accommodations should submit their request for accommodations as soon as possible, as it may take up to two weeks to review the request. For more information, please visit the CAE website (www.cae.ucla.edu), visit the CAE at A255 Murphy Hall, contact CAE by phone at (310)825-1501, or by telecommunication device for the deaf at (310) 206-6083.