

USC Marshall

School of Business

MKT 402 – Introduction to Marketing Analytics – Fall 2022

Note: this syllabus is tentative; it will be updated throughout the semester. This version: August 15, 2022.

Class Hours and Locations

16508R: 10am Tuesday/Thursday

16509R: 2pm Tuesday/Thursday

Professor

Yanhao “Max” Wei, Marketing Department, USC Marshall

Office: HOH 618

Office Hours: by appointment OR approach after each class

E-mail: yanhaowe@marshall.usc.edu OR yanhaowe@usc.edu

Course Description

Analyze marketing data and develop actionable insights to guide marketing decisions. Apply statistical tools, machine learning, and economic analysis to digital marketing problems.

Learning Objectives

At the end of the course, you should be able to: (1) read and summarize a typical consumer dataset, (2) understand common data science methods used in analyzing consumer data, (3) apply these methods to answer marketing questions and support marketing decision making, (4) communicate the results of analysis clearly and logically to an audience.

Prerequisites and/or Recommended Preparation

No formal prerequisites. Recommended Preparation: BUAD 310 or COMM 301 or PSYC 274 or MATH 116. A preliminary understanding of the following subjects will be useful but not required: (i) spreadsheet applications such as Excel or Google Sheet, (ii) basic descriptive statistics such as mean, variance, and histogram, (iii) programming languages such as Python or R.

Required Materials

Readings will be assigned throughout the semester.

We will be using Google Sheet and RStudio.

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 remotely (e.g., via Zoom).

Attending the classes is THE main component of this course. If you want to do well in this class, my biggest advice is to come to classes, follow the classes, and participate as much as you can. This course consists of many workshops (only 4 lecture classes!). So this is a mostly learning-by-doing course and participating in the workshops is crucial for learning the materials.

If you have to miss a class for legitimate and unforeseeable causes, it is the responsibility of the student to make up for missed classes (e.g., meet with a classmate to review what was missed).

Several quizzes will be given in class throughout the semester. Missing any quiz will affect your grade.

Office Hours

Office hours are complements to the class: ask clarifying questions, talk about more in-depth topics related to the class, discuss your study plans (both for this class and for the future). I will not repeat a whole block of materials that have been already delivered in class.

Class Forum

We will use Piazza (www.piazza.com). By the first week, I will have sent every registered student an invitation email. The forum is the place for you to make friends, set up groups, and help each other. I will use the forum to: (1) post class materials, (2) make class announcements, and (3) answer/discuss questions. So make sure to check the forum regularly.

When you have a question, please seriously consider using Piazza before sending emails. This way, others can see my answer, and you can benefit from the questions asked by others on Piazza too. However, use email if there is anything a little private that you want to communicate with me.

Grading Policies

The various components of the course grade are weighted as follows:

	Points
3 Exams	60 (20+20+20)
Group project	20
Quizzes	10
Participation	10
TOTAL	100

The Exams

Details about each exam will be explained in class. Make-up tests are allowed only in rare circumstances and must be approved by me beforehand. Make sure you are available to take the exams on the scheduled dates. Taking the final exam early is not an option. Please discuss any scheduling conflicts with me during the first two weeks of the semester. Challenges to exam scoring should be brought to my attention no later than one week after the scores are given.

Group Project

Group project is worth 20% of your grade. Basically, we will analyze a dataset to derive useful insights for marketing questions. You will collect the data from a public source. A good place to start is Kaggle, where people post all kinds of sales or customer choice data. Before midterm we will use one class to decide which dataset to use. Each group will present and promote one dataset, convincing us why we should all work on that dataset. Then we will vote for one dataset that all groups will work on from then on. I would slightly encourage you to choose a rich dataset, i.e., many observations, many variables, ideally with (links) to unstructured data. A rich data will present much more opportunities for exploration. A simple dataset limits the opportunities, typically leading to somewhat a dry presentation.

A group should consist of 6 (in rare occasions, 7) students. I will assign groups randomly. We will maintain the same group throughout the semester for other types of group activities.

The final presentation will be at the end of the course. Each presentation will be evaluated by me as well as other groups in the audience. One purpose of the group project is to learn collaboration; group members receive the same grade for the group project. However, severe freeriding by a member, if reported by all other members of the group, will be penalized.

As to the group project, feel me to ask me clarification questions such as: “Can we use just a part of the dataset?” “Can we complement with external data sources?” “Should we focus on a single marketing question or try answering multiple questions?” However, I will refrain from answering questions related to analysis, such as “How to estimate the demand curve here?” This is to be fair to the other groups.

Course Calendar

*Tentative schedule only! This version: August 15, 2022.

Calendar	Topic	Notes
Week of 8/22	Overview; Google Sheets & R Workshop: Consumer Survey 1	
Week of 8/29	Workshop: Consumer Survey 2 Workshop: Consumer Survey 3	
Week of 9/5	Lecture: Basic Statistics Workshop: Ad Effectiveness 1	
Week of 9/12	Workshop: Ad Effectiveness 2 Workshop: Ad Effectiveness 3	
Week of 9/19	Midterm 1 Lecture: Linear Regression	
Week of 9/26	Workshop: Pricing Experiment 1 Workshop: Pricing Experiment 2	
Week of 10/3	Workshop: Pricing Experiment 3 Final presentation data pick	
Week of 10/10	Workshop: Market Testing 1 <Fall recess>	
Week of 10/17	Workshop: Market Testing 2 Workshop: Market Testing 3	
Week of 10/24	Midterm 2 Lecture: Logit Regression	
Week of 10/31	Workshop: Consumer Choice 1 Workshop: Consumer Choice 2	
Week of 11/7	Workshop: Consumer Choice 3 Lecture: Neural Nets	
Week of 11/14	Workshop: Product Classification 1 Workshop: Product Classification 2	
Week of 11/21	<Thanksgiving>	
Week of 11/28	Game: Location competition Final presentation	
Week of TBA	Final Exam	

MARSHALL GUIDELINES

Add/Drop Process Please note that you may be dropped from this course if you miss the first two lectures. You can only add a class after the first week of classes if you receive approval from the instructor, per the academic policies described on our university website. See the “Academic Records and Registrar” website for specific add/drop and related deadlines (<http://arr.usc.edu/>). If you intend to drop, pay attention to the deadline that allows you to drop without a “W” on your transcript.

Students with Disabilities 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 as early in the semester as possible. For more information visit www.usc.edu/disability.

Statement on Academic Integrity USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as to avoid using another’s work as one’s own. All students are expected to understand and abide by these principles. The Student Handbook, (<http://www.usc.edu/scampus>) contains the University Student Conduct Code. Students are expected to know the USC’s Academic Integrity Policies (i.e., copying, fraudulent possession of an exam, plagiarism, submission of purchased papers, submitting the same assignment to more than one instructor) and be aware of recommended sanctions (i.e., F for the course, suspension or expulsion) associated with violating such policies. Students will be referred to the Office of Student Judicial Affairs and Community Standards (<http://sjacs.usc.edu>) for further review, should there be any suspicion of academic dishonesty. Failure to adhere to the academic conduct standards set forth by the Office and our programs will not be tolerated by the USC Marshall community and can lead to dismissal.

Recording and Sharing Please do not record any lecture, class discussion, or meeting with me without my prior express written permission. The word “record” or the act of recording includes, but is not limited to, any and all means by which sound or visual images can be stored, duplicated or retransmitted whether by an electro-mechanical, analog, digital, wire, electronic or other device or any other means of signal encoding. I reserve all rights, including copyright, to my lectures, slides, course syllabi, and related materials available to the students enrolled in my class whether posted on Blackboard or otherwise. They may not be reproduced, distributed, copied, or disseminated in any media or in any form, including sharing websites.

Open Expression 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:” marshall.usc.edu/about/open-expression-statement

Support Systems (1) 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.

(2) National Suicide Prevention Lifeline - 1-800-273-8255

suicidepreventionlifeline.org

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

(3) Relationship and Sexual Violence Prevention and 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.

(4) Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298 - equity.usc.edu, or 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. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

(5) 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 of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

(6) USC Support and Advocacy - (213) 821-4710 - uscsa.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

(7) 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.

(8) USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call dps.usc.edu, or 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.

(9) 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.

(10) Office of Disability Services and Programs - (213) 740-0776 - dps.usc.edu, ability@usc.edu.

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. 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. 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 (dsp.usc.edu) 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 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.