MKTG212: Data and Analysis for Marketing Decisions
Section 001: MW 10:30-11:50AM, Location TBD
Section 003: MW 1:30-2:50PM, Location TBD

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Teaching Assistant: TBD
TA Email: TBD

Course description: Data is increasingly driving marketing decisions. Firms have access to more data, and more detailed data on their customers, and on their past marketing actions than ever before. Such data may include in-store and online customer transactions, product usage data, data from A/B testing, customer surveys, as well as prices and advertising. This course is an introduction to the fundamentals of data-driven marketing, including topics from classical marketing research and modern marketing analytics. Using real-world applications from various industries, the goal of the course is to familiarize students with several types of marketing problems as well as how to leverage this wealth of data to make effective marketing decisions. The course will involve formulating critical problems, developing relevant hypotheses, analyzing data and, most importantly, drawing inferences and telling convincing narratives, with a goal of producing actionable results.

Course Logistics and Policies

- Prerequisite: STAT101 (or equivalent). MKTG101 is also recommended.
- Textbook: There is no required textbook. Optional textbook TBD.
- Canvas: I will upload all lectures to Canvas (after class), as well as all readings and course materials. Homework submissions **and exams** will all be done through Canvas.
- Software: Excel (with Analysis ToolPak and Solver), R

  I will demonstrate all analyses in class using either Excel or R, with an emphasis on Excel. You may use whatever software you like to do homework, but I can't offer help for programming languages that I don't know. Instructions on downloading and setting up R will be available on Canvas. Please email me if you do not have access to Excel.
- Readings: Required readings (and podcasts/videos) will be marked clearly on the syllabus. Please read them *before* coming to class.
- Assignments: All assignments are to be submitted to Canvas. ***No late submissions will be accepted***, and there are no make-up assignments.
- Questions about assignments should be posted on the **Canvas discussion board**. Please do not email the professor or TA. If you have a question, chances are others do, too.
- Electronics policy: No electronic devices allowed in class. Laptops will be allowed only for exams, and for in-class exercises, which will be clearly specified in advance.

Assessment

The final course grade will be determined by:

- 50% - Exams
  - 20% = Midterm (your better score of two)
  - 30% = Final exam
- 30% - Assignments (10% each)
- 10% - Online quizzes (graded for completion; miss up to 2 with no penalty)
- 10% - Course participation (attendance)

Exams:

There will be three exams: two midterms and one final. These are individual exams. **The final will occur during the regularly scheduled final exam period and is cumulative.** The two midterms will be done during class and cover the material from Lectures 1-10 and 11-20 respectively. All three exams will be administered through Canvas. **Of the two midterms, only the higher score will count toward your final grade.** Note that this policy only applies to the midterms; the final exam will count for everybody.

Assignments:

For all of the assignments, you have the option of working in a group of **up to five** students (you may also complete them individually). Groups must be reported to the TA in advance, and once your group is submitted to the TA, you may not change your group for that assignment. There is no need to stay with the same group for all three assignments, although you may if you want to.

The first two assignments are aimed at applying the ideas and methods learned in class. Parts of these assignments will involve doing actual analysis of real data, but the goal of them is not to test programming skills. As mentioned above, you may use whatever tool you like to do these assignments (including Excel and R). However, if you use something other than Excel or R, we can't guarantee support.

The third assignment will let you explore something interesting to you. You may:

1. Apply the methods learned in class to an interesting dataset or marketing problem,

2. Report on a method that may be useful to marketing managers, but was not covered,

3. Report on a recent development in data-driven marketing, or on a company doing interesting work in the space.

The deliverable of Assignment 3 will be an in-class presentation (~5 minutes long; actual length will be determined by the number of groups). These will be graded on how relevant they are to the course, and on the quality of the presentation.

Online quizzes:

These will be given most weeks on Canvas. The questions are based on the content of that week's lectures. They are always due on **Sunday at 11:59PM on Canvas**. They are graded for **completion**, and you can miss **up to two** quizzes without penalty. These quizzes are designed to help you prepare for the exams and will contain questions *very similar* to the exam questions. They will also help me assess whether or not everyone is comfortable with that week's lecture content.

Course participation:

This part of the grade will be determined by a number of factors, including, but not limited to:

- Class attendance **(the primary factor)**;
- Participation in in-class or online discussions;
- Completion of optional (depth) exercises of the homework.

Note that, *even if you do not participate at all*, you can still do well in this class by doing well on assignments and exams. However, if you do *not* do well on assignments and exams, participation gives you a way to help improve your grade.

Tentative Course Schedule

Unit 1: Marketing Data: What types of data are used to make marketing decisions?

1	Course Introduction
	NO CLASS (MLK DAY)
2	Primary Data
3	Secondary Data
4	Customer Surveys
5	Experimentation (A/B Testing)

Unit 2: Fundamentals of Data Analysis: How can I tell if my marketing is working?

6	Statistical Testing
7	Regression I
8	Regression II
9	Advanced Regression Techniques
10	**Midterm Exam I**

Unit 3: Conjoint Analysis: How can I effectively design and price new products?

11	Conjoint Analysis I
12	Conjoint Analysis II
	NO CLASS (SPRING BREAK)
13	Guest Speaker #1
14	Choice-based Conjoint

Unit 4: Market Structure and Segmentation: Who are my customers?

15	Segmentation and Cluster Analysis
16	Factor Analysis I
17	Factor Analysis II

Unit 5: Forecasting: How much will my customers spend?

18	New Product Forecasting
19	Customer Lifetime Value
20	Guest Speaker #2
21	**Midterm Exam II**

Unit 6: New Trends: An introduction to methods and ideas from modern marketing analytics.

22	Advertising and Attribution Models
23	Guest Speaker #3 (Tentative)
24	Text Analysis
25	Machine Learning and AI
26	Data and Ethics; Conclusions
27	Presentations
28	Presentations