The Wharton School University of Pennsylvania	MKTG 212/ 712 Data and Analysis for Marketing Decisions Professor Gideon Nave

Course Syllabus and Schedule

Instructor: Professor Gideon Nave
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Teaching Assistant TBA

Office Hours: **By appointment only -** Monday or Wednesday

Prerequisite: STAT101 (or equivalent). MKTG101 is also recommended

Recommended Text: Aaker, Kumar, Leone and Day (AKLD)
Marketing Research (11th Ed.), Wiley (**ISBN:** 978-1118156636)

Required Bulkpack: Please obtain - there are cases and assigned readings

Software: JMP and Excel

Course Website: Canvas (lectures will be available under "files" a day before class)

Group Assignments: *(i)* There will be group assignments due during the semester
(ii) All assignments are due **submitted online on canvass**
(iii) Group formation is discussed below

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

Overview and Objectives

Firms have access to detailed data of customers and past marketing actions. Such data may include in-store and online customer transactions, customer surveys as well as prices and advertising. Using real-world applications from various industries, the goal of the course is to familiarize students with several types of managerial problems as well as data sources and techniques, commonly employed in making effective marketing decisions. The course involves formulating critical managerial problems, developing relevant hypotheses, analyzing data and, most importantly, drawing inferences and telling convincing narratives, with a view of yielding actionable results.

Course Materials and Approach

In the course, we will use a variety of readings, cases and computer-based exercises. The readings and complete list of cases are contained in the course bulkpack. Lecture notes and additional handouts will be made available throughout the semester. The readings and cases are designed to introduce concepts and principles. Please read the assigned reading and cases before coming to class.

The computer and data-based exercises are designed to give you hands-on experience with making effective marketing decisions.

Course Software

I will demonstrate statistical analyses using Excel or JMP. You are not required to do your assignments in these two software packages; however, I can't promise you quality support if you choose a package that I do not know.

Assessment

Your final grade in the course will be based on class participation (case preparation and general contribution), written assignments, and a final examination. The evaluation is as follows:

The final course grade will be determined by:

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

Assignments and Group Formation

Students must organize themselves into groups of **up to 5 people** in order to do the group assignments. 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. However, if you use something other than Excel or

JMP, 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 in some of the 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
- Participation in class or online discussions

Tentative Schedule of Class Meetings

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

1	1/17	Course Introduction READ: Backward Marketing Research
2	1/22	Primary Data and Customer Surveys READ: Customer Discovery and Validation for Entrepreneurs
3	1/24	Secondary Data
4	1/29	Experimentation (A/B Testing)
5	1/31	Data Driven Research for Consulting
6	2/5	Data in E-commerce

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

7	2/7	Hypothesis Testing
8	2/12	Go / No Go Decisions
9	2/14	Regression I
10	2/19	Regression II
11	2/21	Advanced Regression Techniques

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

12	2/26	Conjoint Analysis I
13	2/28	Conjoint Analysis II
14	3/12	Choice-based Conjoint
15	3/14	Conjoint in the Real World

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

16	3/19	Segmentation and Cluster Analysis
17	3/21	Factor Analysis I
18	3/26	Factor Analysis II

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

19	3/28	New Product Forecasting: The Bass Model
20	4/2	Customer Lifetime Value

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

21	4/4	Advertising and Attribution Models
22	4/9	Influencer Marketing
23	4/11	Machine Learning and AI READ: The Great AI Awakening (NY Times)
24	4/16	Text Analysis

Unit 7: Course Wrap-up

25	4/18	Data and Ethics

26	4/23	Personality targeting, Conclusions
27	4/25	Presentations
28	4/30	Presentations