

## MKT 372.23 – Data Analytics for Marketing (DRAFT)

*Prerequisite: Admissions to a Business Major, and MKT 337 or MKT 337H*

(Unique Number TBD)

Last Updated on October 2, 2022

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**The syllabus is a general plan for the course; changes announced to the class by the instructor may be necessary. You are responsible for keeping up with any adjustments.**

Email: rex.du@mcombs.utexas.edu	Office: CBA 7.208
Day/Time: Tue & Thu 12:30 – 1:45 PM	Classroom: CBA 4.328

**Office Hours:** Wed 2:00 – 3:00 PM (in person) or by appointment (in person or Zoom)

**TA:** TBD

**TA Office Hours:** TBD

**Zoom Meeting Info** (in case needed for remote sessions or office hours):

Meeting ID: TBD / Passcode: TBD (**must join with UT Zoom account**)

**Canvas Page:** TBD

### Course Materials:

1. Required textbook – Marketing Analytics Digital Courseware from Stukent (\$79.99)
2. Supplementary readings, datasets, slides, notes, videos, etc. available @ Canvas
3. Check your email (the one on UT class roster) on a regular basis for class announcements

### Software:

1. Microsoft Excel (with Solver enabled) and free add-ins (TBD)
2. Power BI, R, Python (basics)
3. BlueSky Statistics Open Source Edition (Build 10.2), downloadable @ <https://www.blueskystatistics.com/>, is a fully featured analytical workbench:
  - It is free and works for both PC and Mac. Follow the instructions carefully for installation.
  - An intuitive graphical user interface, attractive interactive output for hundreds of frequently used exploratory analysis, data preparation, visualization, basic and advanced modeling techniques including model scoring.

- Automatic R syntax generation for hundreds of frequently used exploratory analysis, data preparation, visualization and modeling techniques. R syntax editor that allows you to write and execute R code and see richly formatted output. Save and share output in PDF, HTML

### **Course Description:**

This course will introduce students to the world of making more effective marketing decisions through the use of data. Students will learn about sources of data, methods of collecting and cleaning the data, analyzing the data, and finally presenting the data in meaningful and impactful ways. Using real-world data and applications from a variety of industries, the objective of this course is to familiarize students with the empirical and analytical tools needed to make effective marketing decisions in the age of large and plentiful datasets.

**Who Should Take It:** Students who are interested in improving their skills in business analytics in general, marketing analytics in particular; who are willing to go the extra mile to acquire essential skills in building up their resume value

**Who Should NOT Take It:** Students who are looking for an “easy” course, for whom getting an A is of paramount importance (as opposed to acquiring important new skills), or who do not anticipate a career that would involve data analytics

### **Key Learning Objectives:**

- Demonstrate an understanding of
  - common marketing data technologies and platforms
  - common use cases of marketing analytics
  - foundational marketing analytics processes and techniques
- Study and practice
  - marketing data summary and visualization
  - social listening and text analysis
  - search listening and trend analysis
  - A/B testing and field experimentation
  - market basket analysis and collaborative filtering for product recommendation
  - cluster analysis for segmentation
  - sales forecasting
  - pricing analytics (demand curve estimation, price optimization, hedonic regression)
  - customer analytics (customer lifetime value, lead scoring, churn prediction)
  - product analytics (conjoint analysis)
  - advertising analytics (adstock model, marketing mix model, multitouch attribution)

### **Class Format:**

The primary pedagogic philosophy of this course is *learning by doing*. We will use a variety of tools to help understand the fundamentals of data analytics for marketing, and learn the tools through direct hands-on experience:

- Step-by-step in-class demonstration of real-world marketing analytics examples
- Individual assignments with data-intensive exercises, all of which involve analyzing data and solving problems by using methods and tools learned in class

**Grading (TBD):**

Assignments and activities will contribute to the final grade according to the table below.

<b>Grading Element</b>	<b>Weight</b>
Individual Assignment I (due at start of class on Tue 2/28)	25%
Midterm Exam (Thu 3/2, open book)	15%
Individual Assignment II (due at start of class on Tue 4/18)	25%
Final Exam (TBD, open book)	25%
Essay on course takeaways (due at start of class on Thu 4/20)	5%
In-class contribution (evaluated by the instructor at the end of the semester)	5%
<b>Grading Distribution</b>	
Semester Average	Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
59 or less	F
<b>Class Attendance</b>	
Attendance is mandatory for all class sessions. If you cannot attend a session for one reason or another, let me know by <b>email</b> in advance. <b>0.5% will be deducted from the final grade for each unexcused absence.</b>	

**Summary of Class Sessions (DRAFT):**

**This a general schedule for the course; minor adjustments may be necessary.**

<b>Session</b>	<b>Date</b>	<b>Day</b>	<b>Topics</b>	<b>Readings</b>
1	1/10	Tue	Course Introduction	
2	1/12	Thu	Overview of Marketing Analytics	
3	1/17	Tue	Foundational Marketing Analytics Tools	
4	1/19	Thu	Marketing Data Technologies & Platforms	
5	1/24	Tue		
6	1/26	Thu	Marketing Data Summary & Visualization	
7	1/31	Tue		
8	2/2	Thu	Social Listening & Text Analysis	
9	2/7	Tue	Search Listening & Trend Analysis	
10	2/9	Thu		
11	2/14	Tue	A/B Testing and Field Experimentation	
12	2/16	Thu		
13	2/21	Tue	Market Basket Analysis and Collaborative Filtering for Product Recommendation	
14	2/23	Thu		
15	2/28	Tue	Individual Assignment I Review	
16	3/2	Thu	Midterm Exam (Open Book)	
17	3/7	Tue	Cluster Analysis for Segmentation	
18	3/9	Thu	Sales Forecasting	
3/13 – 3/18 Spring Break				

19	3/21	Tue	Pricing Analytics (Demand Curve Estimation, Price Optimization, Hedonic Regression)	
20	3/23	Thu		
21	3/28	Tue	Customer Analytics (Customer Lifetime Value, Lead Scoring, Churn Prediction)	
22	3/30	Thu		
23	4/4	Tue	Product Analytics (Conjoint Analysis)	
24	4/6	Thu	Advertising Analytics (Adstock Model, Marketing Mix Model, Multitouch Attribution, Digital Marketing ROAS)	
25	4/11	Tue		
26	4/13	Thu		
27	4/18	Tue	Individual Assignment II Review	
28	4/20	Thu	Course Recap	
Final Exam (Open Book) Date & Time TBD				