

# Marketing Analytics - MKT/OPRE 4337 Syllabus

Spring 2022

## Professor/ Instructor

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Office: 13.327

Student Hours in person: Thursday 10 to 12 am

Student hours via MS Teams: By appointment

I welcome you to contact me outside student hours.

You can email me or message me on MS Teams chat.

## General Information

### Course Description

In 2012 the *Harvard Business Review* described Data Scientist as the most attractive job of this century. However, in recent forums and blogs reflecting industry observations, the expected results of these roles do not always come to fruition. The positions actually require a combination of math, technology, domain knowledge, and soft skills to put it all together to generate actionable insights. Candidates who have the earlier two skills often lack the latter and vice-versa. The role of a ‘well rounded’ analyst is becoming prominent in each field, so for marketing, the time has come to introduce the Marketing Analyst. The number of marketing analyst jobs is high and median salaries are attractive (You can check this for yourself on Glassdoor and other sites). With the help of case studies, introduction to modeling methods, skill-building sessions in R and Excel, and participative sessions, this course will introduce you to the world of Marketing Analytics. This course is particularly suited for students interested in careers in business and marketing. I hope you are ready for an entry-level marketing analyst position and interested in a career in marketing analytics at the end of this course.

### Course Objectives and Learning Outcomes

The course objectives are two-fold. First, the course provides students with frameworks to convert stated marketing issues into problems in analytics. Here the students will understand the different metrics, develop visualization and data summaries, interpret the trends and exceptions and describe possible methods to address the issue/marketing challenge. We will cover this for multiple marketing issues. Second, the course provides students with skills to run and interpret a few essential modeling techniques. The focus will be to apply, analyze and make recommendations. In most meeting sessions, the first half will focus on the marketing issues, and the second will be skill-building.

By the end of the course, the students will be able to

1. Describe the roles and responsibilities of a marketing analyst/ benefits of marketing analytics
2. Perform exploratory data analytics with visualization, translate a marketing issue and summarize a marketing analytics problem
3. Define metrics and methods for a broad set of problems
4. Construct Excel/ R based models for select challenges (Marketing Mix models, Logistic regression, Conjoint analysis, Cluster analysis, and forecasting)
  - The list of methods is subject to change.
5. Interpret model results and recommend solutions to marketing managers

## Teaching Method

No one solution solves all problems in marketing. Hence, there are few 'correct' answers and more 'best' answers appropriate for given situations. Consequently, this course offers an opportunity to prepare you for a career in marketing analytics and support marketing decisions. You will need analytical skills to help select the appropriate solution. You will also require teamwork, writing, and project management skills to survive the challenges of marketing decision support. I use teaching methods that allow you to develop these workplace-related skills while analyzing marketing issues. For example, you will work in teams that work together for the entire semester. You will solve small in-class assignments, presentations, and a project as a team to facilitate your ability to work in a group. In case of disruptions in face-to-face meeting schedules due to the pandemic, we will use technology in the best possible way to keep up the spirit of team working.

Further, I require students to write short reflection notes for the cases discussed. These assignments convey basic argumentation skills, which you need later at your workplace. I subscribe to these teaching methods to prepare you for the workplace and pedagogical perspective. Research shows that active learning opportunities enhance student learning. In other words, you will learn more if I engage you with tasks than if I were only lecturing to you.

## Course Materials

### Required Textbooks and Materials

I do not require you to purchase a textbook. I will provide notes, readings, cases on eLearning, and some material that you can read online or download at <http://www.utdallas.edu/library/>. You are not required to print material made available electronically.

### Technical Equipment

I encourage you to bring your laptop. We will utilize it heavily in class.

## Academic Calendar and Assignments

Analytics @ work cases - may be taught by industry practitioners as guest lectures- Given the current pandemic situation, I am working on modalities. I will change the fields based on class needs.

Date	Session Time	Topic	Short Quiz and Reflections Note Due	Assignment Due
1/18/22	7 to 8:15 pm	Introduction and logistics		
	8:30 to 9:45 pm	Introduction to Marketing Analytics.		
1/25/22	7 to 8:15 pm	Market Analysis		
	8:30 to 9:45 pm	Excel, R, and Tableau Basics. Project Discussion- 1		
2/1/22	7 to 8:15 pm	Analyzing Competition	1	Assignment 1
	8:30 to 9:45 pm	Data Visualization -1		
2/8/22	7 to 8:15 pm	Analytics @ work - CPG/ Retail /Telecom	2	
	8:30 to 9:45 pm	Data Visualization -2. Project Discussion- 2		
2/15/22	7 to 8 pm	Market Segmentation	3	Assignment 2
	8 pm to 8:15 pm	Team Case Presentation		
	8:30 to 9:45 pm	Conjoint Analysis		
2/22/22	7 to 8 pm	Product and Service Analytics	4	
	8 pm to 8:15 pm	Team Case Presentation		
	8:30 to 9:45 pm	Marketing Mix Models/Linear Regression 1		
3/1/22	7 to 8:15 pm	Mid Term Exam		
	8:30 to 9:45 pm	Project progress Discussion (Optional)		

Date	Session Time	Topic	Short Quiz and Reflections Note Due	Assignment Due
3/8/22	7 to 8 pm	Pricing Analytics	5	Assignment 3
	8 pm to 8:15 pm	Team Case Presentation		
	8:30 to 9:45 pm	MMM/Linear Regression 2		
3/15/22	No Class	Spring Break		
3/22/22	7 to 8:15 pm	Analytics @ work - Technology/ Media / Entertainment	6	
	8:30 to 9:45 pm	MMM/Linear Regression 3		
3/29/22	7 to 8 pm	Promotion Analytics	7	Assignment 4
	8 pm to 8:15 pm	Team Case Presentation		
	8:30 to 9:45 pm	Logistic Regression - 1		
4/5/22	7 to 8 pm	Distribution Analytics	8	
	8 pm to 8:15 pm	Team Case Presentation		
	8:30 to 9:45 pm	Logistic Regression - 2		
4/12/22	7 to 8:15 pm	Analytics @ work - Healthcare/ Pharma	9	Assignment 5
	8:30 to 9:45 pm	Cluster Analysis		
4/19/22	7 to 8:15 pm	Customer Analytics	10	
	8:30 to 9:45 pm	Forecasting		
4/26/22	7 to 8:15 pm	Analytics @ work - Banking and Financial Services	11	Assignment 6
	8:30 to 9:45 pm	Business to Business Analytics		
5/3/22	7 to 8:15 pm	Student Project Presentations	12	
	8:30 to 9:45 pm	Revision of Concepts for Final Exam		
5/10/22	7 to 8:15 pm	Final Exam		

## Grading Policy

### Short Quiz/ Reflection note

A short quiz and reflection note of the case or topic discussed the previous week will help clarify the subject and also enable you to develop arguing different perspectives in your job. There will be 12 such notes, and 2 low grades will be dropped, and 10 best will be considered for final grading. Each quiz or reflection note will carry 10 points. Late submission will be penalized by 10% on day 1, 30% on day 2, and 100% after day 3. The short quizzes will also help prepare you for midterm and final exams.

### Assignment

The assignment may have multiple-choice, short answer, modeling questions, and interpretation essay questions. There will be 4 to 6 assignments—a total of 120 points.

### Case presentations

There will be 5 in-class team presentations Worth 100 points.

### Term Project

There will be a term project where you will use the skills learned in marketing principles and this course and solve marketing challenges. I will provide more details in the first class. There will be 2 to 3 meetings to discuss the project proposal and monitor progress. You will make a team presentation and submit the data, document, and codes for grading. The term-project will carry 250 points

### Peer Evaluation

There will be two peer evaluations (carrying 15 points each)

### Mid Term

The midterm will be an in-class exam containing multiple-choice questions for 100 points

### Final Exam

The midterm will be an in-class exam containing multiple-choice questions for 100 points

	Points
Short quiz/ Reflection note	100
Assignment	120
Case Presentation	100
Term Project	250
Peer Evaluation	30
Mid Term Exam	100
Final Exam	100
Total	800

Your final letter grade will be determined by the percentage of points that you achieve relative to the maximum number of points possible. The following scale will be used:

- 97% - 100% = A+ [ If university policy does not permit A+ this will be A]
- 94% - 96% = A
- 90% - 93% = 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-
- 0% - 59% = F

Note: Late work will be penalized.

### Expectations

#### What I expect of my students

- Willingness to work: As a general rule, one credit represents three hours of academic work per week (including lectures, laboratories, discussion groups, fieldwork, study) averaged over the semester. Please invest time into this course to reap the benefits.
- Classroom etiquette: Please be prepared for the class and complete assigned tasks or read the notes/ cases before the lecture. Lectures and discussions will not duplicate but instead will build on, and hence will assume prior familiarity with, assigned readings. Your active, informed, and civil participation in discussion and class activities is expected. Please be attentive in class, arrive prepared to discuss course materials, and respect other class members while you and they participate.
- Course policies: Please read the course policies in this syllabus. They facilitate a learning experience that is efficient and effective and represent the professional code of conduct in the real world.

#### What you can expect from the instructor; I will

- Offer a learning environment that challenges you in order to provide opportunities for growth.
- Be prepared to the best of my abilities.
- Post the necessary material/ instructions for the following lecture by Friday 4 pm every week.
- Encourage you to explore your own ideas in response to the assigned tasks. Be open-minded in responding to your ideas and suggestions. Offer constructive feedback.

- Open to constructive feedback from you on my performance. If you have ideas or suggestions, please do not hesitate to discuss them with me. I am committed to make this the best possible classroom experience.

## Course Policies

### Technology in the classroom

I suggest you refrain from all devices in the first half of each (Face to face) class meeting. Laptops are allowed and encouraged in the classroom for the second half of each class meeting. Bring yours to classes, as we will have hands-on training on tools and group activities. However, I expect you to only use the laptop for work related to the course: no gaming, no social media, no emails, and no chatting. Turn off your cell phone. It is very distracting to others. “Off” means that it does not ring or vibrate.

Further, please do not make video or audio recordings of the classes without my prior permission. A video or audio recording will seriously impede the willingness of students to come forward and engage in an open and honest discussion. I like the class to be interactive and want all students to participate in discussions. The reason why the dialogue between professors and students should stay within the closed community of the classroom is simple. Academic freedom and candid communication in the school require a certain degree of privacy for all the people in the school.

### Communication

#### Email

Email is the most reliable way to contact me outside of class and student office hours. While I may sometimes reply to emails more quickly, you should generally expect a response within 48 hours. Here are some tips for email success [ I learned the hard way]

- *Provide a descriptive subject line (ex: “Question about analysis for Final Project”)*
- *Begin with a greeting (ex: ”Dear Prof. Raja”) and end with a signature (ex: ”Sincerely, Student”). Launching straight into the message is bad, but “Hi!” is poor form, and “Hey Prof!” is an unmitigated disaster. “Dear” and “Hi” are fine, so long as you follow both by a name or title: ”Hi Professor” or ”Hi Mr. Raja.”*
- *Be clear and concise. Write short messages, make clear requests, get to your point rapidly, and offer to provide more information rather than launch into your story.*
- *Check to see whether your question is already answered in the syllabus or other course materials before sending an email. Also, ask for information after you’ve looked on Google*
- *Use your official school email address. The email address from high school, “\_\_\_@gmail.com” or “\_\_\_@icloud.com,” is inappropriate due to FERPA requirements.*
- *Form: Capitalize and punctuate.*

#### Student Hours (Office Hours) :

I will hold regular office hours (see the top of this document). I am committed to being available to you for questions and concerns. However, in return, I ask you to observe some simple guidelines: -

- If you make an appointment to see me at my office/ Microsoft teams, be on time.
- Keep your cell phones off during student hours!
- If another student is already speaking to me during student hours, wait for your turn. Every student deserves privacy when discussing class issues with me.

#### Statement on classroom conduct / general etiquette guidelines

The following suggestions embody some general guidelines of courtesy that I strongly recommend.

- Turn off your cell phone. It should not ring or vibrate.
- Do not fall asleep. It is rude and distracting. Bring coffee if you need it.
- Be courteous to your fellow students.
- Raise your hand when you answer or ask a question.
- The class starts at 7:00 pm, not 7:15. Be here on time.
- Respect my time and your peers’ time. I will respect yours.

- Please be proactive in anticipating and planning for any absences or problems in completing coursework. Making arrangements for ‘missed work’ before the due date is better than doing it after.
- Please do not carry on side discussions while someone else is speaking.
- Please do not begin gathering or packing your belongings until I dismiss class.

### Statement regarding diversity

Diversity is an asset. You will meet and work with people different from you in a globalized world. Therefore, it is necessary to recognize that people who are different in almost all cases bring something valuable to the table: Experiences that we can learn from, insights that were not apparent to us, skills that we do not have, or knowledge that we can benefit. We should create a learning environment in this class that allows everyone to share their unique strengths. After all, research shows that the best work is usually produced by groups that combine the different comparative advantages of their group members. I, therefore, emphasize that: we will welcome anyone to our class, regardless of their sexual orientation, religious observances, political orientation, physical characteristics, cultural background, nationality, or any other characteristics. I recognize that I am not perfect, but I promise to make every effort. If you have any concerns, I strongly encourage you to talk with me.

### UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus. Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

**The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.**