BA in Management / MBA Program (cross-listed)
Spring 2023
MKTG414 / MKTG514 – Marketing Analytics
Version 3, March 21st, 2023

Instructor: Vahid Karimi Motahhar
Office: SBS 1015
Phone: (216) 483-9712
Fax: (216) 483-9699
E-mail: Vahid.karimimotahhar@sabanciuniv.edu
Web: SuCourse
Office Hours: Wednesdays from 13:40 to 14:40 (+ By appointments)

Type	Time	Days	Where
Class	From **3:40 pm** to **6:30 pm**	Wednesdays	FMAN #G013-14 (and online stream)
Spring 2023 semester disclaimer: We may have to revise the course plan according to the reassessment to be made country-wide, regarding higher education, at the beginning of April. The content to be delivered is certain but the method of course delivery, the number and dates of exams, and some other details are subject to change.			

Course Objective:

Understating data has become an inevitable task in Marketing. This course will guide you on how to collect, organize, and analyze marketing data. You will learn how to solve marketing problems using the most appropriate techniques. By completing this course, you will gain the necessary skills to approach marketing data and analytics wisely, so you could make business recommendations and decisions. This course is for you, if you are interested in acquiring the necessary toolkits to kick start your career in a marketing analytics position in a firm, your own startup, or a marketing consulting firm, or even to understand your fellow marketing coworkers when they talk about their insights from data. This will be a hands-on course based on Excel software and R language (background in programming is not required). The course is focused on interpreting the results of some given R codes and students will master Marketing Analytics skills and not programing skills.

Learning Outcomes:

Upon successful completion of the course, the student should be able to:
1. Use key marketing metrics and the basics of marketing analytics.
2. Define the marketing analytics problem.
3. Choose the most appropriate analytics technique to solve the problem.
4. Discuss alternative solutions effectively.
5. Determine/set the best course of action.
6. Demonstrate understanding of data-driven decision modeling.
7. Be able to communicate the marketing analytics project with stakeholders.

Course Material:
- *WW Book*: **W**inston, **W**ayne, Marketing Analytics: Data Driven Techniques with Microsoft Excel, New York: Wiley and Sons, 2014.

Optional Reading Material:
- *ISLR Book (Optional)*: James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). An introduction to statistical learning: With Applications in R (Vol. 112, p. 18). New York: Springer.

List of Cases

Case 1	Date:	Week 3
	Case:	Portland Trail Blazers
	Subject:	Conjoint Analysis
	Teamwork:	Yes
	Grading:	In-class participation
Case 2	Date:	Week 9
	Case:	Have Text, Will Travel: Can Airbnb Use Review Text Data to Optimize Profits?
	Subject:	Text Analysis
	Teamwork:	Yes
	Grading:	In-class participation
Case 3	Date:	Week 12
	Case:	Chase Sapphire: Creating a Millennial Cult Brand
	Subject:	Segmentation
	Teamwork:	Yes
	Grading:	In-class participation

Course Web:
All course-related materials (lecture notes, assignments, grades, etc.) will be posted on SUCourse. I will usually post materials on Mondays, Thursdays, and Fridays. So, students are required to check the course web often. I will also create and maintain a cloud folder for convenience.
Sabancı University uses a very powerful web-based tool called Turnitin. Turnitin is the worldwide standard in online plagiarism prevention. It allows instructors to compare student papers against a database composed of millions of articles. Every paper you submit will go through a Turnitin check, and the results will impact your grades.

Instructional Design:
This course will be delivered through in-person lectures. Students must bring their own laptops (sharing is not permitted), and make sure that required software (Excel, R and RStudio) are installed and functional on their laptops.

Grading:

Participation	10%
3 Individual Assignments	30% (each 10%)
1 Project Presentation	15%
1 Project Final Report	20%
Final Exam	25%

Requirements:

Each student must contribute to discussions. To do well, students should learn from active participation in presentations and discussions. In the evaluation process, the quality of participation is considered. In particular, I will try to assess how your contributions enhance both the content and process of a discussion by evaluating your comments considering the below points:

- Do your comments add to our understanding of the issues?
  An attempt to get "airtime" is not evaluated as quality participation. The class requires other than frivolous comments that lack substance and serious thinking. You must not have only keep something in mind and say it no matter how irrelevant it is to the ongoing discussion.
- Are your comments timely and linked to the comments of others?
- Do your comments move the discussion along by providing a new perspective?
- Are your comments clear, or obscure?
- Do your comments reflect a concern for maintaining a constructive and comfortable classroom atmosphere?

If you are unable to attend a particular session, please inform me as early as possible. Also, prepare for "cold calls" during class meetings. If you attend but are unprepared to participate in the day's discussions, notify me prior to the beginning of the class to avoid any embarrassment.

I will be taking the role in each class and maintaining class-by-class participation marks and will provide feedback to you during the term.

Individual Assignments

There will be individual assignments during the semester. Students are encouraged to discuss the assignments but are expected to submit their own individual effort in answering questions.

Final Project (4 students per team)

Most of the material presented in this course will serve as a chance for you to work with your fellow teammates. Therefore, a major element of the course is to complete *the final project* in a team setting.

In-class teamwork:

Most of the classes will be held while students are working on a set of problems in their team settings. I believe in learning by getting your hands dirty working and collaborating on a problem. I expect you to actively work and participate while I teach you the steps on how to solve that specific problem.

Project Details:

The project for this course will be CONJOINT Analysis + Segmentation. You will work with the same team members that you work during the class team works. The conjoint analysis is a technique that has been used in marketing for decades. The technique is

powerful, and it is the only technique that can be used to validate consumers' willingness to pay for a certain product or a service.

There are two main ways of conducting a conjoint analysis: Full Rank (easier for analysis), and Choice Based (easier for the survey respondent). Using a powerful software such as JMP (by SAS) you can conduct any of the two conjoint analyses. However, for learning purposes, we will limit ourselves to R and EXCEL, and their basic functionalities.

Detailed project information will be provided during the semester. The projects will be carried out in groups (4 members in each).

"Grading" section discusses the Grading Components.

Midterms (6th week and 10th week) and Final (Exam Week)

Questions in the midterm exams will come from the materials covered in the class. I will provide you a sample exam. Before each midterm, I will go over the answers of the sample exam and will dedicate the time to review the materials and answer your questions. Participation is still mandatory for these classes. The Final exam will not be comprehensive, and school will announce the date. **If your grades for all three exams (2 midterms and 1 final) are below the 60% threshold, you will automatically fail the course with no exceptions.**

Final Case Presentation and Reports

Students will present their work on the projects during one of the last two weeks of classes (TBA). Every group will be given 8 minutes to present their work and 2 minutes to answer questions. Every group member is expected to present during the presentations. Presentations will be part of your grading. You must to submit your final report of the project by the time of your final exam (announced by school). Please be advised that the deadline will not be extended. So, if you believe that the finals weeks will be a busy period of time for you, consider finishing up your report prior to that.

Peer Evaluation in Project

Students will be asked to provide an evaluation of the members of their team twice, **after the Project Presentation and after Project Final Report.** Each student will divide 100 points between the members of their team, including themselves. This division should reflect that person's judgment of the contribution of the members of their team. The scores should not be merely functions of time spent by each member, but they should be measures of the "contribution;" their relative contribution to the idea generation, research, analysis, writing, oral presentation, report writing, etc. If the team was highly functional, and each member did what they committed themselves to, then the student can assign the same mark to each member of the team. If, on the other hand, some members of the team did not fulfill their commitments and did not contribute as much as the others, then points can be distributed unevenly.

The points submitted by all members of the team will be aggregated by the instructor. Every student will be given their aggregate peer evaluation, without disclosing the individual peer evaluations to the students.

In case there is no consensus among the team, for example, if three students divide the marks evenly and the fourth one divides them unevenly, then the instructor will use their judgment to assign peer evaluation marks--possibly after meeting with the members of the team.

In cases where there are conflicting marks, it is most likely that the instructor will meet with the team members and provide a mark based on an interview. For example, in a group

of four, if Students A and B believe they did most of the work, and Students C and D believe otherwise, the team may be called in for an interview in order to be fair to everyone. Past experience indicates that in most groups points will be distributed evenly. There will be a few groups where peer evaluations will play a role in the marks. The primary goal of this exercise is to avoid giving undeserved credit to individuals who did not help their teams. However, it is possible to have upwards adjustments of marks in case of students who have done more than what the group expected of them.

To give a simple example, if the team grade is 25 out of 30, and if your peer evaluation indicates that your contribution was less than what was expected, then your mark will be less than 25 out of 30. There are no simple rules for adjustment.

Academic Honesty:

Learning is enhanced through cooperation and as such you are encouraged to work in teams, ask for and give help freely in all appropriate settings. At the same time, as a matter of personal integrity, you should only represent your own work as yours. Any work that is submitted to be evaluated in this class should be an original piece of writing, presenting your ideas in your own words. You should properly cite everything you borrow from books, articles, or web sites (including those in the syllabus). Although you are encouraged to discuss your ideas with others (including your friends in the class), it is important that you do not share your writing (slides, MS Excel files, reports, etc.) with anyone. Using ideas, text and other intellectual property developed by someone else while claiming it is your original work is *plagiarism*. Copying from others or providing answers or information, written or oral, to others is *cheating*. Unauthorized help from another person or having someone else write one's paper or assignment is *collusion*. Cheating, plagiarism and collusion are serious offenses that could result in an F grade and disciplinary action. Please pay utmost attention to avoid such accusations.

Classroom policies and conduct

Sabancı Programs value participatory learning. Establishing the necessary social order for a participatory learning environment requires that we all:

- Come prepared to make helpful comments and ask questions that facilitate your own understanding and that of your classmates. This requires that you complete the assigned readings for each session before class starts.
- Listen to the person who has the floor.
- **Come to class on time**. Any student who is going to be late for a class needs to inform me at least 1 hour before the class starts. Coming to class any later than 10 minutes late is not acceptable unless you have already informed me.
- I will announce when you are permitted to use your laptop. When the permission is given, it is only to be used for the asked class activities. should not be doing any non-class activities during class time.

ChatGPT and other large language models (LLMs) AI usage policies

I expect you to benefit from AI (e.g., ChatGPT and image generation tools) in this class. In fact, some assignments might steer you toward using it. Learning to use AI is an emerging skill and I make examples during our class on how to use it. I am happy to meet and help you with these tools during office hours or arranged meetings.

Be aware of the limits of ChatGPT, such as the following:

- If you provide minimum-effort prompts, you will get low-quality results. You will need to refine your prompts in order to get good outcomes. This will take work.

- <u>Don't trust anything it says.</u> If it gives you a number or fact, assume it is wrong unless you either know the answer or can check with another source. You will be responsible for any errors or omissions provided by the tool. **It works best for topics you understand.**
- AI is a tool, but one that you need to <u>acknowledge</u> using. Please include a paragraph at the end of any assignment that uses AI explaining what you used the AI for and what prompts you used to get the results. Failure to do so is in violation of academic honesty policies.
- Be thoughtful about when this tool is useful. Don't use it if it isn't appropriate for the case or circumstance.
- In cases where you are asked to accomplish an assignment without AI assistance, be advised that your assignment could be tested with AI detecting platforms. Not following assignments guidelines could lead to serious consequences including but not limited to academic misconduct and course failures.

Course Schedule: The schedule presented below is tentative. This schedule and syllabus are subject to change at the instructor's discretion. Additional readings may be provided by the instructor. List of the books and their respective acronyms are provided in the Optional Reading Material section.

Week 1	
Topic:	Introduction to Marketing Analytics
Readings:	WW Book Chapters 1 and 2;
	"Models will run the world" Wall Street Journal 2018

Week 2	
Topic:	Excel Pivot Tables and Graphing
Readings:	WW Book Chapters 1, 2;
	"How Do You Tell a Story with Data Visualization?" Forbes 2019

Week 3	
Topic:	Conjoint Analysis 1 (Results Interpretation)
	Guest Speaker: Data Scientist from Blend360 in the US
Readings:	WW Book Chapter 16;
Requirements:	Case #1 (Portland Trail Blazers)

Week 4	
Topic:	Simple Linear Regression and Correlation
Readings:	WW Book Chapter 9;
	ISLR Book Chapters 2, 3

Week 5	
Topic:	Using Multiple Regression to Forecast Sales
Requirements:	*Individual Assignment 1* due before the class.
Readings:	WW Book Chapter 10;
	ISLR Book Chapters 2, 3

Week 6	
Topic:	First Midterm Exam (100 minutes) +

	Linear Regression leftovers
Requirements:	*Midterm* during the class time.
Week 7	
Topic:	Logistic Regression
Readings:	WW Book Chapter 17
Week 8	
Topic:	Conjoint Analysis 2 (Methodology and Application)
Readings:	WW Book Chapter 16
Week 9	
Topic:	Segmentation and Cluster Analysis
Readings:	WW Book Chapter 23;
	ISLR Book Chapter 10;
Requirements:	*Individual Assignment 2* due before the class;
	Case#3 (Chase Sapphire: Creating a Millennial Cult Brand)
Week 10	
Topic:	Second Midterm (100 minutes)
	Midterm during the class time.
Week 11	
Topic:	Customer Lifetime Value
Readings:	WW Book Chapter 19
Week 12	
Topic:	Web Analytics + Text Analysis
Readings:	WW Book Chapter 45;
Requirements:	Case#2 (Have Text, Will Travel: Can Airbnb Use Review Text Data to Optimize Profits?)
Week 13	
Topic:	Project Presentations
Week 14	
Topic:	Principal Component Analysis (PCA)
Requirements:	*Individual Assignment 3* due before the class;
Readings:	WW Book Chapter 37