Course Syllabus
MGMT 203 B - Spring 2022

Introduction to Data Analysis and Research in Business

Instructor:

Name: Raha Akhavan-Tabatabaei
Email address: akhavan@sabanciuniv.edu
Office location: FMAN 1061
Office hours:

Raha: Wednesdays 15:40-16:30 on Zoom or by appointment.

TA office hours will be announced on a weekly basis.

Teaching Assistant:

Ozlem Atalay: ozlem.atalay@sabanciuniv.edu
Bahareh Farhoudinia: bfarhoudinia@sabanciuniv.edu

Course Objective:

This course provides a detailed introduction to data analysis and research in business. Applications are chosen from a variety of areas such as operations and marketing, to lay the foundation for more detailed study in those functional areas. The emphasis is both on conceptual understanding of the material and doing hands on statistical analysis. Microsoft Excel and associated add-ins are used for the purpose of analysis.

Learning Outcomes:

Upon successful completion of the course, the student should be able to:

- Understand the role of research in business and ethical issues associated with it.
- Develop surveys that meet generally accepted quality standards.
- Use appropriate tools (charts, Pivot Table, etc) in MS Excel to summarize, visualize, analyze quantitative data.
- Judge the quality of a questionnaire developed for collecting data to support business research.
- Calculate and interpret descriptive statistics.
- Apply sampling correctly.
- Perform and interpret hypothesis tests.

- Develop and interpret simple linear regression models that are appropriate for the purpose.

Class Textbook:

Statistical Techniques in Business and Economics, Lind, Marchal, Wathen, 18th Edition, Mc Graw Hill, 2021. *The e-book must be purchased from Homer Bookstore online, at this link:*

https://www.homerbooks.com/urun/statistical-techniques-in-business-and-economics

Course Evaluation:

Reading assignments:	15%
Individual Homework Assignments x 5:	20%
Midterm Exam	25%
Final Exam	25%
Data Analysis Team Project:	15%

Remarks:

- There will be a **reading assignment** from the course textbook for each topic. The students are supposed to complete this assignment through the Connect component of the e-book.
- The course requires the use of **Microsoft Excel**. Students can use both Windows and Mac versions of Excel. We will use Excel's functions and "Analysis Toolpak" add-in, which comes pre-installed with Excel for Windows and Excel for Mac 2016.
- There will be five **individual homework assignments** throughout the course. The students will be given adequate time to complete and turn in the assignments as per instructions.
- All submitted reading and homework assignments, midterm and final exams must demonstrate the student's own work. Project presentation must directly reflect the team's work and participation. Any suspicion to **fraud will be handled according to the university regulations** and may result in failing the course.
- **SUCourse** and email are the official means of communication in this course and it is the student's responsibility to review messages and posts frequently, as well as to upload in-class and homework assignments.
- There will be **no makeup for the midterm reading or homework assignments**. The final exam grade will replace the midterm grade, in case of missing the midterm with a valid excuse.
- If the exams are conducted on Zoom or any online platform, the student's camera and microphone must be turned on during the whole exam.

- In case considered necessary by the course instructor, an oral exam will be given to selected students in conjunction with the written midterm and/or final exam.

Course Schedule:

Week	Topic	Requirements
1 – Feb 28	Introduction, Review of Graphs and Plots	
2 – Mar 7	Descriptive Statistics	
3 – Mar 14	Probability Distributions	HW 1 (Descriptive Stat)
4 – Mar 21	Probability Distributions	
5 – Mar 28	Normal Distribution	
6 – Apr 4	Survey Methods	HW 2 (Probability Distributions)
7 – Apr 11	Confidence Interval on Proportions	Form Project Teams
8 – Apr 18	Hypothesis Testing on Proportions	Select Project Topic
9 – Apr 25	Midterm Exam	HW 3 (CI and HP on proportions)
10 – May 2	Spring Break	
11 – May 9	Confidence Interval on Mean	
12 – May 16	Hypothesis Testing on Mean	Design and Conduct Surveys
13 – May 23	Linear Regression	HW 4 (CI and HP on means)
14 – May 30	Linear Regression	
15 – Jun 6	Projects Submission	HW 5 (Linear Regression)

Disclaimer: This syllabus is subject to minor changes in dates, instructions and the grading system.