

Course Syllabus - MGMT 203
Introduction to Data Analysis and Research in Business
Spring 2019

Instructors:

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Where:	FMAN G060	FENS L045
Time:	W 2:40 – 5:30	W 2:40 – 5:30

Teaching Assistants:

Bahareh Farhoudinia (bfarhoudinia@sabanciuniv.edu)
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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 Material:

Recommended Textbook:

S. Christian Albright, Wayne L. Winston. Business Analytics: Data Analysis & Decision Making, 6th Edition, CENGAGE Publishing, 2017.

Additional Resources:

The following book, containing useful material for survey/questionnaire design, is on reserve: William G. Zikmund, Barry J. Babin, Jon C. Carr, Mitch Griffin. Business Research Methods, 8th Edition, South-Western College Publishing (Library Call Number: HD30.4 .B87 2010)

While covering each subject students will be directed to the relevant chapters of the online statistics book (<http://onlinestatbook.com/>)

Course Evaluation:

In-class quizzes:	15%	(during lectures and recitations)
Individual Homework Assignments:	10%	(best 4 counts)
Midterm Exam:	35%	
Modeling Challenge 1	22%	
Modeling Challenge 2	8%	
Data Analysis Team Project:	10%	

Remarks:

- There will be **in-class assignments** during some sessions (including the recitation hours), to enhance the student's comprehension of the subjects discussed. These assignments are to be submitted individually.
- 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 one **individual homework assignment** per topic. The students have enough time to complete and turn in the assignment as per instructions.
- All submitted in-class and homework assignments, midterm exams must demonstrate the student's own work. Project report and 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** in-class or homework assignments. In case of medical problems (with a valid doctor's note) or other emergencies (confirmed by an official report), make-up will be offered for the midterm exam or one modeling challenge during the finals week.
- Use of cell-phones and other electronic devices (aside from MS Excel on laptops) is not acceptable in class, unless instructed by the professor for academic purposes.

Course Schedule:

Wk	Date	Topic	Requirements (by 5pm)
1	13/02	Introduction, Graphs and Plots	
2	20/02	Descriptive Statistics	
3	27/02	Probability Distributions	25/02: HW 1 (Descriptive Stat)
4	06/03	Probability Distributions	
5	13/03	Review Session for Midterm	11/03: HW 2 (Prob. Dist.)
6	20/03	Midterm Exam	18/03: Form Project Teams
7	27/03	Normal Distribution Survey Methods	25/03: Select Project Topic
8	03/04	Confidence Interval on Proportions	
9	10/04	Hypothesis Testing on Proportions	08/04: Design and Conduct Surveys
10	17/04	Major Fest – No Class	15/04: HW 3 (CI and HP on proportions)
11	24/04	Confidence Interval on Mean Modeling Challenge 1	
12	01/05	Labor Day Holiday	29/04:
13	08/05	Hypothesis Testing on Mean	06/05: HW 4 (CI and HP on means)
14	15/05	Linear Regression Modeling Challenge 2	
15	Finals Week	-----	20/05: HW 5 (Regression) 24/05: Submit Project Video

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