# Course Syllabus - MGMT 203
# Introduction to Data Analysis and Research in Business
# Spring 2021

## Instructor:

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## Teaching Assistant:

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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 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:

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|---|---|
| Weekly reading assignments: | 15% |
| Individual Homework Assignments x 5: | 25% |
| Quizzes x 3: | 45% |
| Data Analysis Team Project: | 15% |

## Remarks:

- There will be a **reading assignment** from the course textbook for each week. 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 three **individual homework assignment** throughout the course. The students will be given adequate time to complete and turn in the assignment 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 quizzes, reading or homework assignments**. The lowest quiz and assignment grades will be dropped.
- 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 exam.

Course Schedule:

| Week | Topic | Requirements |
|---|---|---|
| 1 – 02/22-24 | Introduction, Review of Graphs and Plots | |
| 2 – 03/01-03 | Descriptive Statistics | |
| 3 – 03/08-10 | Probability Distributions | HW 1 (Descriptive Stat) |
| 4 – 03/15-17 | Probability Distributions | Quiz 1 |
| 5 – 03/22-24 | Normal Distribution | |
| 6 – 03/29-31 | Survey Methods | HW 2 (Probability Distributions) |
| 7 – 04/05-07 | Confidence Interval on Proportions | Form Project Teams |
| 8 – 04/12-14 | Hypothesis Testing on Proportions | Select Project Topic |
| 9 – 04/19-21 | Confidence Interval on Mean | HW 3 (CI and HP on proportions) |
| 10 – 04/26-28 | Hypothesis Testing on Mean | Quiz 2 |
| 11 – 05/03-05 | Linear Regression | Design and Conduct Surveys |
| 12 – 05/10-12 | Bayram Holiday | HW 4 (CI and HP on means) |
| 13 – 05/17-19 | Linear Regression | Quiz 3 |
| 14 – 05/24-26 | Projects Submission | HW 5 (Linear Regression) |

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