Class time & Place:
Office hours:

People have an excellent track record for solving problems that are small and familiar, but today's world includes an ever-increasing number of situations that are complicated and unfamiliar. How can decision-makers—individuals, organizations in the public or private sectors, or nations—grapple with these often-crucial concerns? In many cases, the tools they're choosing are mathematical ones. Decision-making is a collection of quantitative techniques that is intended to cut through irrelevant information to the heart of a problem, and then it uses powerful tools to investigate that problem in detail, leading to a good or even optimal solution. The purpose of this course is to introduce you to the most important prediction and optimization techniques, which include some aspects of statistics and data mining, especially those arising in operations research (or operational research).

Course books: Students DO NOT have to buy any book or material. Dr. Cengizci will provide all the necessary materials for his students by combining the contents of following books:

· Camm et al., Business Analytics: Descriptive, Predictive, Prescriptive, 4th edition, Cengage, 2020.

· S. C. Albright, Business Analytics: Data Analysis and Decision Making, 7th edition, Cengage, 2020.

Recommended readings: If you are interested in further/advanced reading about Calculus, you may see the following book:

· M. L. Berenson et al., Basic Business Statistics: Concepts and Applications, 14th edition, Pearson.

Academic Honesty and Plagiarism

It is considered cheating when an examinee during exams

- gets unduly help or,
- helps another examinee with answers or,
- makes use of help other than permitted.

Assessment Criteria:

The criteria are listed below:

1) Attendance & Participation (15%): You are strongly advised to participate in the classes.

2) Assignments (25%): Please be careful about the section Academic Honesty and Plagiarism.

3) Midterm (25%): Midterm examination will be as "*written examination.*"

4) Final exam (35%): Final examination will be as "*written examination.*"

Course Schedule

Week 1	Introduction to Business Analytics
Week 2	Mathematical preliminaries
Week 3	General purposes of statistics
Week 4	Introduction to statistics
Week 5	Numerical descriptive measures - I
Week 6	Numerical descriptive measures - II
Week 7	A general review & exercises
Week 8	MIDTERM
Week 9	Introduction to probability - I (Discrete)

Week 10	Introduction to probability - II (Continuous)
Week 11	Hypothesis testing
Week 12	Linear Programming
Week 13	Introduction to linear regression analysis
Week 14	A general review & exercises