

# DA 501 - Introduction to Data Analytics

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## Course Objectives:

Learning the principles of programming for data science with Python. Understanding data types, collections, flow control. Using different file formats for input and output. Reviewing fundamentals of scientific computing. Visualizing data by various kinds of plots. Building data frames and exercising data access operations. Completing several in-class projects as well as a term project.

## Course Outline:

- Introduction to Data Science
- Python Basics
- Flow Control and Functions
- File Operations - Case Study: Sentiment Analysis
- Arrays, Vectors and Matrices – Case Study: Recommendation System
- Plotting – Case Study: Benford’s Law
- Data Frames – Case Study: Missing Data
- Merging, Grouping, Pivoting

## Lecture Notes:

The lecture notes will be available on SUCourse before each class. You will also need to download semi-finished Python scripts that will be completed during in-class exercises.

## Software:

We shall use [Anaconda \(Python 2.7\)](#). This software installs all the necessary packages on your computer. Please install it before coming to the next class.

## Grading

Term Project	60%
Presentation	25%
Participation	15%

## Academic Integrity

Please be aware that violators of academic integrity will be subject to disciplinary action. You are strongly advised to go through the academic integrity policy implemented in Sabancı University. This policy as well as related announcements can be reached through the internal website of the university.