Syllabus (Fall 2021-2022)

DA501 - Introduction to Data Analytics

Meeting Times

Saturday   13:00 - 16:00

Wednesday   19:00 - 22:00

Instructor

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Teaching Assistant (TA)

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Course Description, Aim and Content

This course teaches the fundamental ideas to clean, manipulate, process and analyze data. The students will work on data analysis problems arising in various data-intensive applications. The course involves many in-class coding exercises where the students are expected to work on several case studies. Through these exercises, the course shall also serve as an introduction to data analytics and modern scientific computing with Python programming language.

Schedule[1]

1. Introduction to Python and Google Colab
   a. Syntax, variables, operators
   b. Input/output
   c. Basic calculations
2. Decision Making
3. Sequences
   a. String
   b. List
   c. Range
   d. Matplotlib
4. Loops
   a. For loops
   b. While loops
   c. Control Statements
5. User defined functions
6. Methods
7. Basic data structures
   a. Dictionary
   b. Set
8. File I/O
9. Numpy
10. Pandas
11. Lambda, Map, Filter
12. Seaborn

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[1] Instructor may change the contents and the order of the topics during the semester

Grading

- Assignments   60%
- Final Exam (Physical)   40%

CodeRunner Feature of SUCourse+

We apply an automated grading process on the take-home exams. You can use CodeRunner to check your expected grade, before submitting your take-home exam.

CodeRunner can be pretty busy and unresponsive during the last day of the submission. Thus, leaving the submission to the last minute is not a good idea.

CodeRunner and Sample Runs together give a good estimate of how correct your implementation is. However, we may test your programs with hidden test cases as well, but you will still be able to see your final grade before submitting your work.

Submit your take-home exam via SUCourse+ ONLY! Any other methods (paper, email, etc.) are not acceptable, either.

The internal clock of SUCourse+ might be a couple of minutes skewed, so make sure you do not leave the submission to the last minute. Do not forget that "No successful submission on SUCourse+ on time = a grade of 0 directly for that take-home exam."

Announcements and SUCourse+

Students are responsible for all announcements made during the regular class meetings. Students should check their Sabanci University e-mail accounts (mymail.sabanciuniv.edu) and follow the SUCourse+ site (https://sucourse.sabanciuniv.edu/plus/) for this class regularly as they are responsible for all announcements and postings delivered through these sources.

Important Note: This document may be modified during the semester (Fall 2021-2022) due to unforeseen reasons.