

PYTHON COURSE

Crack the Code



Coding Club & Big Data and AI Club

September 2022 - December 2022

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Professor's contact:

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COURSE DESCRIPTION

This series of events, hosted by the Coding Club & Data and AI Club, is designed to teach you Python from a beginner or intermediate level and will allow you to implement the skills you learn in a challenge at the end of the series. This course is organized and taught by students, for students. Beginner students will start the course on October 5th and intermediate students will start the course on October 19th.

GET A CERTIFICATE

There will be a total of 7 classes before the Challenge on November 23th. By attending at least 70% of the classes and by completing the challenge successfully you will obtain a certificate for the course. The challenge is open to anyone and the top 3 students will obtain an additional certificate. However, if you attend the challenge and do not complete the course you will not be eligible to receive the course certificate.

SCHEDULE

- Start Date: October 5
- End Date: November 23

1-hour class on a weekly basis on **Wednesday at 19:00**.

TOPICS COVERED

Session 1: **Beginners Intake**

Basic overview:

- Variables types
- Lists
- Indexing (operations with lists)
- Sets

Session 2:

- For loops
- While loops

Session 3: **Intermediates Intake**

- Functions

Session 4:

- Data structures
 - Dictionaries
 - Lists
 - Sets
 - Tuples

Session 5:

- Pandas library

Session 6:

- Numpy library

Session 7:

- Visualizations

CHALLENGE

Students will have to analyze the dataset to be able to solve a series of questions. The challenge will be done individually.

PRE-REQUISITES

- Have Google Colab installed, if you want to get deeper into data software here is the link to install anaconda:
 - https://repo.anaconda.com/archive/Anaconda3-2022.05-Windows-x86_64.exe
 - <https://www.youtube.com/watch?v=HW29067qVWk>
- Having a code text editor like Sublime

BIBLIOGRAPHY

- **THEORY**
 - Python for Data Analysis, Data wrangling with pandas, numpy and ipython, McKinney
 - Python for Data Science Handbook, Essential tools for working with data, VanderPlas
- **PRACTICAL**
 - Python Crashcourse, (Matthes, Eric)

CHEATSHEETS

- <https://mega.nz/file/JhNjVaqB#fxjc20NsrVMnDICTs5KoG7QeSdh6BuPM-YYGLB2nRjk>