

Coding Made Easy: Introduction to Python

Language: Python 3
Code Editor: Google Colaboratory
Format: 4 x 1.5hr lessons

Course Overview

This course introduces students to Python, a popular programming language. Python is both great for beginners learning how to code, as well as for industry, from web applications to Artificial Intelligence. Over this beginner-level course, students will learn basic concepts in computer programming along with their application using Python syntax through hands-on exercises and projects.

This course is designed for beginners, and has no prerequisites.

Lesson	Objectives
1	<ul style="list-style-type: none">- Know that Python is a high-level interpreted language- Familiar with the Google Colaboratory environment- Identify and distinguish between data types (integers, floats, strings, booleans)- Understand and apply variables in a script- use input() to receive user entries within a program
2	<ul style="list-style-type: none">- Use comments in a script- Identify how conditionals and logical operators are used in a program, and apply them in basic scenarios- Use for and while loops to efficiently program repetitive tasks.
3	<ul style="list-style-type: none">- Identify, distinguish and understand what data structures (lists, tuples, dictionaries) are and how to access and manipulate its elements- Use in-built and user-created functions to program basic app features- Find and apply Python modules from the Standard Python Library
4	<ul style="list-style-type: none">- Understand how to read and write into text files, and apply this in a script- Know that Python has packages and modules for data analysis and manipulation- See an example of NumPy and pandas to read data and make basic observations

Course Requirements

1. Attend online (live) at least 75% of all workshops
2. Score at least 60% on assignments:

Assignment	Weighting
Lesson 1 Notebook & online quiz	20%
Lesson 2 Notebook & online quiz	20%
Lesson 3 Notebook & online quiz	20%
Lesson 4 Notebook & online quiz	20%
Final Assignment	20%

A Certificate of Completion will be issued upon successful completion of the course requirements.