**Course Syllabus**

Introduction to Python Programming Language Summer 2020

Time: Tuesday & Thursday from 4 pm to 5 pm

Location: Zoom link, ID:

Instructor: Atefeh Rahmani

Email: [rahmani8atefeh@gmail.com](mailto:rahmani8atefeh@gmail.com)

Description:

This is 11-week online programming class in python. This introductory course is designed for beginners. Python is an interpreted language with a simple syntax and its powerful set of libraries makes it one of the most used and in-demand programming languages. This general-purpose language is commonly used for data analysis, artificial intelligence, web development, and machine learning. In this course, you will learn the tools and techniques for data analysis. By completing this course, students will be able to understand Input/Output (I/O), statements, functions, and Python visualization libraries to design and solve a problem.

Requirements:

You must have access to a computer with an operating system of Windows 8 or later, macOS, or Linux and a high-speed internet connection. Students are required to attend all the classes if possible. By missing a class, you miss the required knowledge for the next class. Therefore, students are strongly encouraged to attend classes.

Python Installer: <https://www.python.org/downloads/release/python-383/>

Online Python Compiler: <https://repl.it/languages/python3>

Python tutorial: <https://www.tutorialspoint.com/python/index.htm>

Course Schedule:

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| Week 1 (June 16/18)   * Introduction, * Installing python & compiler * Python variable, tokens, data types * Basic operators, building calculator | Week 7 (July 28/30)   * Numpy |
| Week 2 (June 23/25)   * function, function call, * Return statement, if statement | Week 8 (August 4/6)   * Pandas * Matplotlib |
| Week 3 (June 30/July 2)   * Looping and control flow * Conditionals and Boolean expressions | Week 9 (August 11/13)   * Data Visualization * Plot dataset |
| Week 4 (July 7/9)   * Nested loops * Array * 2D lists | Week 10 (August 18/20)   * Types of Plots, * Linear regression project |
| Week 5 (July 14/17)   * File handling (I/O) * Reading file * Writing to file | Week 11 (August 25/27)   * Final project |
| Week 6 (July 21/23)   * Dictionaries * Data Frame |  |