

Syllabus

- Introduction to Python
 - Variables
 - Basic Types: String, Integer, Float and Boolean
 - Operators and Expressions
 - Basic Input-Output: `print` and `input` functions
 - Strings in Detail
 - Slicing
 - Indexing
 - Methods: `count`, `replace` and `index`
- Conditional Statements
 - `if`
 - `if-else`
 - `if-elif-else`
 - Nested blocks
- Loops
 - `for` and `while` loops
 - Nested loops
 - `range` function
 - Formatted printing: f-strings and `format` method
- Lists
 - `append` and `remove` methods
 - Basic sorting and searching
 - Nested lists (matrices)
 - Matrix addition and multiplication
- Functions
 - Function definitions
 - Function calls
 - Matrix multiplication using functions
- Collections
 - Lists
 - Tuples
 - Sets
 - Dictionaries
- Recursion
 - Introduction to recursion
 - Binary search
- File handling
 - Opening and closing a file
 - Modes: read and write mode
 - Methods: `readline`, `write`