Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
MAT131	Computer Programming I	1	1	1	1	3	3

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	The aim of the course is to introduce students to the fundamental concepts of programming using the Python programming language.
Content	• Using the console: Searching for, creating, modifying, and deleting files; writing a first Python program and running it from the console. • Variables and data types: Representation of numbers and characters in computer memory (binary number system, two's complement, floating-point numbers, and ASCII code); variables and basic data types in Python. • Operators and conditional statements: Arithmetic, comparison, and logical operators; conditional statements (if, elif, else). • Loops: Using for and while loops. • Arrays and lists: Creating, manipulating, and traversing arrays and lists at a basic level.
References	https://python.sdv.u-paris.fr/ https://hal.science/cel-01176119/file/Algo%20vol.1%20-%20Cours.pdf

Theory Topics

Week	Weekly Contents
1	Linux terminal and console, the shell.
2	Data types and variables: representation of integers and floating-point numbers in memory.
3	Operators and operator precedence, conditional expressions.
4	Loops and flowcharts.
5	Arrays and lists.
6	Functions.
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