

# UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

## **SYLLABUS DEL CORSO**

## Informatica Generale - 2

2122-2-E3301M194-E3301M198M-T2

Learning objectives	
Contents	

#### **Detailed program**

- 1. Introduction to Computer Science
- 2. Machine architecture
  - Von Neumann architecture
    - Central Processing Unit (CPU)

- Computer data storage
- Input and output devices
- Modern computer architectures
- 3. Introduction to Algorithms
  - Variables and data types
  - Flow control: sequence, selection, iteration
- 4. Python programming language
  - Program structure
  - · Primitive data type.
  - Variables and assignment.
  - o Arithmetic, relational and logic expressions.
  - Conditional instructions
  - · Iterative instructions
  - o string, list, and text file.
  - Function: declaration, definition and parameters.
  - Program execution
- 5. Data Base and SQL language.
  - Relational model
  - SQL DDL and DML instructions
- 6. Operating System
- 7. Computer networks

<b>Prerequisites</b>
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#### **Teaching methods**

During the Covid-19 emergency period, lessons will take place in synchronous videoconference.
Assessment methods
In the Covid-19 emergency period, exams will only be online. They will be carried out using the WebEx platfo and esamionline platform.
Textbooks and Reading Materials
<ul> <li>For 1, 2, 4 and 5 use the didactic material that can be downloaded from the course web page</li> <li>For 2: Think Python First Edition, by Allen B. Downey (online) or A. Lorenzi, E. Cavalli, V. Morigg Linguaggio Python. Atlas</li> <li>For 3: A. Lorenzi, D. Rossi. Le basi di dati. Il linguaggio SQL. Atlas</li> </ul>
Semester
Second semester
Teaching language
Italian