



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Informatica Generale - 3

2122-2-E3301M194-E3301M198M-T3

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#### Learning objectives

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#### Contents

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#### 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.
  - Arithmetic, relational and logic expressions.
  - Conditional instructions
  - Iterative instructions
  - 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

## **Prerequisites**

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## **Teaching methods**

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During the Covid-19 emergency period, lessons will take place in synchronous videoconference.

## **Assessment methods**

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In the Covid-19 emergency period, exams will only be online. They will be carried out using the WebEx platform and esamionline platform.

## **Textbooks and Reading Materials**

- For 1, 2, 4 and 5 use the didactic material that can be downloaded from the course web page
- For 2: Think Python First Edition, by Allen B. Downey (free online) or A. Lorenzi, E. Cavalli, V. Moriggia. Linguaggio Python. Atlas
- For 3: A. Lorenzi, D. Rossi. Le basi di dati. Il linguaggio SQL. Atlas

## **Semester**

Second semester

## **Teaching language**

Italian

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