



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Informatica per la Finanza

2223-1-F1601M056

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#### Learning objectives

The aim of the course is to provide to the students the skill for the use of Python language to solve problems of medium complexity in their field of specialization and to translate them into automated procedures.

#### Contents

Python programming and applications to data manipulation and problem modeling

#### Detailed program

- Introduction to PyCharm;
- Python programming:
- operators, basic data types (integers, decimals, booleans, lists, tuples, sets and maps), variables and expressions;
- flow control;
- functions, parameter passing;
- classes;
- NumPy library;
- Pandas library;
- Matplotlib library;
- machine learning: scikit-learn library;

## **Prerequisites**

Mathematical-logical knowledge as acquired during high-school, linear algebra and basic concepts on algorithms.

## **Teaching methods**

Frontal lessons. Lessons take place in computer science lab to allow students to immediately apply the concepts explained.

## **Assessment methods**

Learning assessment includes a written exam and possibly an oral exam. The written exam will take place in the teaching laboratories to evaluate the student's skills in using Python and their competence in solving simple problems.

## **Textbooks and Reading Materials**

Paul J. Deitel, Harvey M. Deitel, Intro to Python for Computer Science and Data Science. Pearson, 2020

## **Semester**

Second semester

## **Teaching language**

Italian

## **Sustainable Development Goals**

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