UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Information Technology - 1

2021-3-E1801M032-T1

Learning objectives

The course aim is to introduce the basic concepts of computer science, the structure and evolution of the automation systems and their main application areas.

Contents

Introduction to Computer Science, machine architecture, introduction to algorithms, data base and SQL.

Detailed program

1. Introduction to Computer science

2. Machine architecture

- Central Processiong Unit (CPU, Computer data storage, I/O devices)

- Modern computer architectures

3. Introduction to Algorithms: variables and data types; flow control (sequence, selection, iteration)

4. Programming in C language:

- Program structure

- Primitive data type

- Variables and assignments

- Arithmetics, relational and logic expressions

- Conditional and iterative instructions

- String, list and text file.

- Function: declaration, definition and parameters.

5. Data base and SQL language: relational model, SQL, DDL and DML

6. Operating System

7. Computer networks.

Prerequisites

- Mathematical-logical knowledge as acquired during high-school.

- First Mathematics course

Teaching methods

Assessment methods

Learning assessment includes a written exam and possibly an oral exam.

Textbooks and Reading Materials

- Mandrioli, Ceri, Sbattella, Cremonesi, Cugola. "Informatica arte e mestiere". McGrawHill - IV edition

- Deitel Deitel. "Il linguaggio C. Fondamenti e tecniche di programmazione". Pearson

Semester

First semester

Teaching language

italian