Computer Science – 055494

MEDTEC School
Cristiana Bolchini

POLITECNICO
MILANO 1863

Class hours

**Lectures and exercises**
Tue. 14:15 - 17:15 – **25.0.2**
Wed. 09:15 - 11:15 – **25.0.2**

**Office hours**
Wed. 16:00 - 18:00 – **ONLINE**
contact me in advance

General information
◊   **Cristiana Bolchini** ✧ tel.: 02 2399 3619 ✧ email: cristiana.bolchini@polimi.it
◊   Gian Enrico Conti ✧ email: gianenrico.conti@polimi.it

Learning goals
The Computer Science course introduces problem solving through computer programming, with the following objectives:
◊   to develop a consistent methodology for solving problems,
◊   to present the foundamental aspects of the Python programming language, and
◊   illustrate the problem solving process with Python through a variety of interesting examples, either framed in the engineering or medical environment.
These competences will be exploited in subsequent courses.

Topics
The course is organized in lectures and practical sessions, and will cover the following topics:
◊   the computer architecture
◊   information representation (integers, floating points, characters)
◊   fundamental aspects: structure of a Python program, built-in basic types and arithmetic/logical operators, statements, input/output, basic control structures/statements
◊   complex data types (lists, dictionaries, sets) and built-in methods
◊   functions, parameters and scopes
◊   files

References
◊   John Hunt, A Beginners Guide to Python 3 Programming, Springer
◊   Mark Lutz, Python Pocket Reference, Editore: O'Reilly Media
◊   any other book

Evaluation
The exam consists of a written test, constituted by 4 or 5 short programming exercises, to be completed within maximum 2 hours. The exam will be evaluated in terms of the quality of the adopted choices with respect to selected data structures and solving algorithm and the correctness of the proposed solutions. It is a closed book exam and no electronic devices (including the phone) are allowed, but a syntax reference will be made available to every student.
The exam will allow students to demonstrate their:
◊   degree of knowledge and understanding of the fundamental aspects of the course
◊   the ability to apply the above mentioned knowledge to solve exercises and realistic problems

Contacts / communication
There is a **beep** course space where I will make resources available, open discussions on the forum, etc. Any request or question about course material / exercises and so on should be handled there:
🌐 https://beep.metid.polimi.it/web/2020-21-computer-science-cristiana-bolchini-/
When sending emails, put "CS:" at the beginning of the subject, and remember to **sign the email**.

2020-21