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Politecnico di Torino

Academic Year 2009/10 (first time established in A.Y.1999/00)

01LQJDR, 01LQJAX, 01LQJJA

Fundamentals of computer science

1st degree and Bachelor-level of the Bologna process in Mechanical Engineering - Vercelli (I FACOLTA' DI INGEGNERIA)
1st degree and Bachelor-level of the Bologna process in Civil Engineering - Vercelli (I FACOLTA' DI INGEGNERIA)
1st degree and Bachelor-level of the Bologna process in Electronic And Computer Engineering - Vercelli (III FACOLTA' DI INGEGNERIA)

Teacher	Status	SSD	Les	Ex	Lab	Years Stability
Sisto Riccardo	PO	ING-INF/05	20	10	10	0

SSD	CFU	Activities	Area context
ING-INF/05	4	F - Altre (art. 10, comma 1, lettera f)	Abilità informatiche e relazionali

Objectives of the course

The course aims to provide students with the fundamental introductory notions of computer science: hardware and software architecture of computers, information representation in computers, boolean algebra, essential fundamentals of programming with high-level languages. Such elements are the basic set of knowledge necessary for all subsequent courses related to computer science.

Expected skills

Appropriate computer science lexicon, knowledge of fundamental features of computers and elementary ability to evaluate them, ability to use boolean algebra, ability to develop elementary programs in the C language.

Prerequisites

No particular prerequisites are needed, apart from a basic computer alphabetization.

Syllabus

Outline of the internal structure and working of computer systems and of the general features of base software. Techniques for internal information representation. Boolean algebra. Essential fundamentals of programming in the C language (language syntax, predefined types and arrays, structured programing and control flow instructions).

Laboratories and/or exercises

Theoretical exercises on binary arithmetic and boolean algebra.

Bibliography

- Course notes, distributed to students.
- Patt, Patel "Introduction to Computing Systems", Mc Graw Hill.

Other texts useful for deepening:

- Kernighan, Ritchie "The C Programming Language", Prentice Hall.

Revisions / Exam

Written examination including open-answer questions and exercises on the course topics.

Programma definitivo per l'A.A.2009/10

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