Master in Computer Science
some general infos


• Some information is in Italian only

• Courses of the first semester:
  – Principles of Programming Languages (PLP)
  – Numerical methods and optimization (Metodi numerici e ottimizzazione, MNO)
    • First lesson: Tue 9-11, Room L1
  – Advanced Algorithms (Algoritmica II, ALG2)
    • First lesson: Tue 11-13, Room N1
Language courses

• Centro Linguistico [www.cli.unipi.it/](http://www.cli.unipi.it/)

• Italian courses for foreigners
  – ENTRY TESTS: 26, 28, 29 and 30 September 2016

• English courses
  – Iscrizione: 23 settembre 2016 ore 9:00 per il 1° semestre

• For some logistic support for non-Italian speaking students: Veronica Tomatis (tomatis@di.unipi.it)
Principles of Programming Languages (PLP-16) – Admins...


- The course is worth 9 CFU/ECTS

- Office Hours: to be fixed
PLP: Evaluation

• 2 midterms
  – Beginning of November
  – Mid December
• Written proof
• Oral exam
• Pre-evaluation:
  – Informal preliminary test: today
  – Goal: assessing the common background
  – No grade
Course Topics and Goals

• The course presents principles and techniques for the implementation and usage of programming languages.

• First part:
  – formal definition of syntax of programming languages
  – main phases of a compiler with emphasis on the lexical, syntactical and semantical analysis phases of the front-end

• Second part:
  – main topics of the structure of programming languages from the viewpoint of the runtime support of its abstract machine and of the expressiveness of the supported linguistic constructs
  – focus on programming constructs of imperative, functional, object-oriented, and scripting languages
Textbooks

- [Scott] Programming Language Pragmatics
  by Michael L. Scott, 3rd edition

  by Alfred V. Aho, Monica S. Lam, Ravi Sethi, and Jeffrey D. Ullman, 2nd edition

- [GM] Programming Languages: Principles and Paradigms
  by Maurizio Gabbrielli and Simone Martini

- [Mitchell] Concepts in Programming Languages
  by John C. Mitchell
Credits

• Slides freely taken and elaborated from a number of sources:
  – Marco Bellia (DIP)
  – Gianluigi Ferrari (DIP)
  – Robert A. van Engelen (Florida State University)
  – Gholamreza Ghassem-Sani (Sharif University of Technology)