Allievi Program, Master in Economics, and Ph.D. in Economics

INTRODUCTORY PYTHON

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Contact Information

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Description

This course introduces the main elements of the Python programming language. The aim of the course is to familiarize the student with the main structures of the language and enable him/her to write simple codes to implement numerical algorithms. It also introduces the main libraries for scientific computing and graphical representation of data.

Topics

The following is the list of topics touched upon in the course:

1. Introduction to computers and programming languages
2. How to use Python (Interactive, Ide)
3. The basic constructs of the Python language:
   (a) Variables and functions
   (b) Data types

   (c) Control flow tools
   (d) Built-in functions

4. Modules and the standard library
5. The main scientific libraries
   (a) Numpy
   (b) Matplotlib
   (c) ScyPy

Students will be required to write simple codes. To the extent that is possible the examples to practice the language will be taken from economics/econometrics models.

Textbooks

The lectures will be based on the following on-line tutorial: "Labs for foundations of applied mathematics: Python essentials" edited by J. Humpherys and Tyler J. Jarvis. A useful complement is the on-line tutorial "Python programming for economics and finance" by T.Sargent and J.Stachurski

Other suggestions will be given during the class.