Introduction to Scientific Programming in Python

The aim of this 3-day workshop is to make an introduction to the Python programming environment for eScience students. The workshop will assume no prior knowledge about programming and will provide a general introduction to basics of Python programming as well as an introduction to data exploration in Python.

Course content

Day 1

- Introduction to Programming and Python Environment Setup
- Programming in Python
  - Syntax
  - Numbers
  - Strings
  - Lists
- Assigments

Day 2

  - Loops and Control Flow
  - Dictionaries & Files
  - Functions
- Matrices, Vectors and Arrays: Numpy package
- Assigments

Day 3

- Functions for Scientific Programming: Numpy & Scipy packages
- Plotting and Visualization: Matplotlib package
- Debugging in Python
- Assignments