UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Scientific Computing With Python

2425-1-113R-09

Title

Scientific Computing with Python

Teacher(s)

Davide Gerosa

Language

English

Short description

The python programming language and its library ecosystem are essential tools in modern science. This class provides an advanced introduction to python and its main functionalities, focusing in particular on its applications to computational physics. Targeted topics include: array vectorization with numpy, pretty plotting with matplotlib, scientific recipes with scipy, just-in-time compilating with numba, module packaging, and unit testing. I will also introduce other essential computational tools, notably Mathematica for symbolic manipulation and git for version control. The format will be highly interactive and tailored to the research interests of the participants.

CFU / Hours

2 CFU - 16 hours

Teaching period

First semester

Sustainable Development Goals

INDUSTRY, INNOVATION AND INFRASTRUCTURE