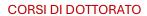UNIVERSITÀ DEGLI STUDI DI PADOVA

Course unit English denomination	An introduction to Python for chemical sciences: from fundamentals to data and HPC
Teacher in charge (if defined)	Nicola Spallanzani (CNR Institute of Nanoscience, Modena)
Teaching Hours	24
Number of ECTS credits allocated	3
Course period	09/2025
Course delivery method	☒ In presence ☐ Remotely ☐ Blended
Language of instruction	English
Mandatory attendance	☒ Yes (85% minimum of presence) ☐ No
Course unit contents	The course, interspersed with practical exercises, is an introduction to using the non-assuming Python language previous programming skills. It will come to illustrate the use of some scientific Python libraries (e.g.numpy,matplotlib)
Learning goals	Knowledge: basics of Python languages and main scientific libraries Skills: Writing Python scripts/Jupyter notebooks useful for own research activity Competencies: Use and design of python to enhance research activity
Teaching methods	Frontal teaching intermixed with coding exercises
Course on transversal, interdisciplinary, transdisciplinary skills	☒ Yes ☐ No
Available for PhD students from other courses	☒ Yes ☐ No Students external to the PhD Course admitted upon evaluation of the CV by the teachers, provided the maximum number of allowed participants (30) has not been reached
Prerequisites (not mandatory)	max 3750 caratteri
Examination methods	Software project assigned by the teacher
Study material	Slides and Jupyter notebooks provided by the teacher

| Additional information (not mandatory) | Max. number of participant:30
Using of own laptop is strongly encouraged |