

## TECHNICAL SHEET OF THE TRAINING ACTIVITY

Basic data of the Training Activity	
Title	Introduction to Python
Character	Transversal
Type	Elective
Duration	10 hours
Schedule	Semester 2, 5 two-hour sessions
Contents	<ol style="list-style-type: none"> <li>1. Fundamentals: Setup, syntax, packages, differences and similarities with MATLAB. Documentation generation (Sphinx and Read the Docs) (4 h)</li> <li>2. Input/output: Files, images, databases, and REST APIs (2 h)</li> <li>3. Data analysis, machine learning, and data visualization. Jupyter (2 h)</li> <li>4. Optimization with Pyomo (2 h)</li> </ol>
Learning Outcomes	<p>By the end of the course students should:</p> <ul style="list-style-type: none"> <li>- Be able to perform a clean install of Python and create separate virtual environments for different projects.</li> <li>- Be familiar with the main packages for input/output operations, data analysis, machine learning, visualization, and optimization.</li> <li>- Know how to automatically generate code documentation.</li> <li>- Comply with the PEP 8 style guide.</li> </ul>
Language	English

### Monitoring procedure

Control of attendance by the professor and oral report on the practical repercussions.

### Mobility actions

Not applicable.