

# Training course

## Scilab fundamentals

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How to master Scilab environment, become familiar with numerical computation. Learn how to program in Scilab language, to read, write and visualize data files. Discover how to build complete scientific applications made of algorithms and GUI.

### Content

#### **Presentation of Scilab**

Window and workspace, command line, basic mathematics operations, matrix operations, basic plotting, editor.

#### **Data types**

Matrices, strings, lists, rational fractions, linear state space, overloading, cells and structs.

#### **Input/Output**

Read/write files (ASCII, CSV, XML, binary files), Scilab data storage formats, system commands.

#### **Basics of programming**

Introduction to scripts and function writing, control structures, iteratives loops and conditional instructions, testing and debugging of the programs, libraries creation.

#### **2D graphics**

Graphic window, graphic handles and their properties, 2D plot functions, graphics export.

#### **Graphical User Interfaces (GUI)**

Dialog boxes, inputs and control and interactions

#### **Duration**

2-3 days

#### **Audience**

This training is intended for engineers, technicians, researchers or teachers wishing to discover Scilab software, its environment and its capabilities.

#### **Objective**

How to use Scilab to perform scientific computations, analysis and data graphics visualization.