

Programming for Neuroscientists

(28.09.-02.10.2026)

Grinevich Department – ZI Mannheim

Purpose

Neuroscience is an interdisciplinary subject integrating behavioral, physiological and molecular techniques. Modern experiments create large data-sets requiring advanced and often customized analysis methods. This course introduces Python as a tool for custom data-analysis, based on a small sample from a larger data-set.

Python is a [popular](#) and rather easy to programming language, with active communities developing programs and packages for advanced data-analysis. To facilitate the adaption of these, participants will acquire fundamental computer-science knowledge together with basic knowledge in Python. This should enable them to enter the begin utilizing more specialized work based on Python.

Goal

Participants will be enabled to create their own short programs and to begin utilizing the work their community already did in Python. The course will also be ease the acquisition of other programming languages.

Description

The course teaches basic programming in Python on the example of an analysis-task based on neuronal data. The focus are theoretical foundations, problem-solving strategies and differences between "biological" and "computer-science" approaches to problems. The course will introduce general concepts and the language itself by creating code for the analysis-task. The participants and the tutor interactively develop the solution and code to solve the analysis task.

Further information

Topic	Information
Language	English
Number of participants	10
Course-materials	https://github.com/Einsied/PythonBasicsForBiologists
Date	28th September until 2th of October 2026
Place	Central Institute for Mental Health, J5 Mannheim Mo: Hans-Martini-Saal, Suchtklinik 4. OG Tue: Raum 106, Therapiegebäude 1. OG Wed: Hans-Martini-Saal, Suchtklinik 4. OG Thu: Raum 106, Therapiegebäude, ZIPP Lounge Fr: Hans-Martini-Saal, Suchtklinik 4. OG
Time-slot	10:00 c.t. - 16:00 c.t.
Prerequisite	none extraordinary
Necessary materials for participants	a device capable to connect to eduroam and able to run a java-script-capable browser (like firefox, Chrome or Edge) with an character input method. The usage of a laptop and pen and paper are advised.
Contact	Dr. Eduard Maier - Eduard.Maier@zi-mannheim.de