
Early Career Researcher Support Programme

Basic Skills and Methods Course

An Introduction to Programming in Python

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7 – 10 September 2020

live online via Zoom

09.00 – 13.00 hrs.

Objectives

Python is an open-source, general purpose programming language which has rightfully gained much popularity in science. It comes with a rich collection of already existing bricks of classic numerical methods, plotting or data processing tools. Python syntax is simple, avoiding strange symbols or lengthy routine specifications that would divert the reader from mathematical or scientific understanding of the code.

This course will provide an introduction to effectively using Python for everyday research needs. Upon completion of the course, participants will be able to read and write data in different formats, intuitively work with and perform simple statistical analyses on their data, and present their analysis in a variety of plots.

Topics

- Python syntax and structure
- Variables, types and values
- Operators and operands
- Conditionals
- Iteration
- Tuples, lists and dictionaries
- Functions
- Classes and objects
- Python modules
- Handling scientific data

Methods

The course will consist of lectures/demonstrations, but will also include time for independent work on tasks and joint discussions on code solutions and other questions you may have.

In the course, we will use Google colab to share codes and exercises. **Participants will therefore need a Google account.**

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Target group

Beginners with no prior experience in using Python

Format and schedule

Live online via Zoom (the link will be provided on 7 September at 08.00)

Time: 09.00 – 13.00 (incl. short breaks)

Mon, 07.09.2020	Installation, Jupyter notebooks, how to write and run Python code, Python syntax and structure; variables, types and values; operators and operands, conditionals
Tues, 08.09.2020	Iteration; tuples, lists and dictionaries
Wed, 09.09.2020	Functions; classes and objects; Python modules
Thur, 10.09.2020	Handling scientific data

Please note that in our online courses, we expect people to turn on their cameras. This is a matter of respect towards the lecturer/s, since it is awkward to talk to a black screen. After all, in the seminar room people wouldn't hide themselves either.

Registration

To register for this course, please visit the course webpage:

<https://www.marum.de/en/education-career/2020-09-07.html>

Please note that your registration will be binding.

The registration deadline for this course is **3 September 2020**.

Any enquiries regarding the course should be addressed to early-career@marum.de.