

Introduction to Python programming and data analysis and visualization

Content	<p>This course is an introduction to programming and data science using the Python programming language. It is specifically aimed at people with no prior programming experience and no background in statistics is required. The course is structured in two parts: During the first three sessions the key concepts of Python programming are introduced, and you learn writing simple programs. The second part introduces relevant python frameworks for data science (NumPy, pandas, Matplotlib, SciPy) and you work on a small project analyzing and visualizing your own data set.</p> <p>Some statistical core concepts are introduced throughout the course. However, the participants are expected to know the methods and best practices for data analyses of their own field of research.</p> <p>This course is an introduction for beginners. For people experienced in Matlab or R it's a good opportunity to broaden their skillset, but not recommended for people with Python programming experience.</p>
Learning Objectives	<p>After the workshop you understand and can use the core concepts of programming in Python, can solve simple programming problems on your own and apply these tools to analyze and visualize your own data sets. This includes plotting your data set and computing some statistical measures. But most importantly: You know where to start and how to deepen and broaden your programming skills from there on.</p>
Individual Feedback	<p>The participant will receive personal support by the trainer during the course.</p>
Trainer:	<p>Niclas Scheuing, M.Sc. Computer Science ETHZ, Lecturer University of Bern</p>
Target Group:	<p>PhD students and postdocs of all fields of research</p>
Nr of Participants	<p>17</p>
Requirements	<p>Python installed</p>
Preparation task	<p>Tbd, estimated workload 2-3h, between each session homework of 2-3h workload will be assigned.</p>
Dates	<p>March 17, 24, 31 & April 21, 28 & May 5, 2023 2:15 p.m. -5:00 p.m.</p>
Location	<p>University of Bern, Main Building, Hochschulstrasse 4, room 117, except on March 24 and 31: UniS Schanzeneckstrasse 1, room A-124</p>
ECTS	<p>1 recommended (18 h in class, 10-15 h preparation and homework)</p>