

# Welcome to Programming with Python!

Kühne Logistics University Hamburg - Fall 2024

# Objectives

This module introduces **programming with python**. Python is a modern and powerful programming language that is widely used in industry and academic projects. Students will learn how to find a code-based solution to basic and complex problems. The course is based on many examples that illustrate how to tackle a potentially complex issue as well as how to implement a solution.

# Learning Outcomes

Upon completion of the course, students ...

- can implement solutions to complex problems in python
- know basic concepts of programming and algorithms such as loops, functions
- can apply basic data manipulation and visualization
- will be able to read and write code
- will have experience working with python libraries such as NumPy, Pandas, Matplotlib
- will know how to collaborate in a small team to find solutions for problems at hand

Please note that this course is **specifically designed for business students**. That is, it is **not required to have any prior knowledge or experience in programming** to attend this course. The teaching format will make it possible to account for different levels of programming skills such that every student can take the most out of the course.

# Course Structure

The course is based on a hands-on approach with a two-fold structure:

1. **Lectures:** In the lectures, we will introduce concepts and illustrate them in reproducible examples.
2. **Hands-on Tutorials:** Students will practically apply the concepts of the lecture in hands-on examples.
3. **Assignments:** Students will solve programming exercises in groups of up to three students that they will have to hand in.

# Course Blocks

The core content of the course is organized in three blocks:

1. **Part I:** Introduction to Programming with Python
2. **Part II:** Data Science with Python
3. **Part III:** Programming Projects

You can find more information on the course blocks and the corresponding lectures in the [syllabus](#).

# How to see the slides

- This course is based on [Quarto](#)
- It uses [revealjs](#) to render the slides
- You find the slides for each lecture in the corresponding lecture
- To see the slides, click on RevealJS in the top right corner

# Passing the Course

- 75% attendance required for passing the course
- You will be given two programming assignments and one project to solve with Python
- You can group up (3 students) and work together
- Each student group submits one solution together

# Questions

If you have any questions regarding the course, please contact me under [vlcek@beyondsimulations.com](mailto:vlcek@beyondsimulations.com).



# Contributors

Thanks to [Phillip Bach](#) whose original course material laid the foundation for this course.