

Syllabus
HOT0020E Introduction into Programming with Python
Prof. Dr. Michael Paetsch, PhD (CPU)
Winter Semester 2023/24

| | | |
|------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------|
| Level | Bachelor | |
| Credits | 3 ECTS | |
| Student Contact Hours | 2 (45 minutes) | |
| Workload | 60 hours within class and 90 hours for self-study | |
| Prerequisites | none | |
| Time | see LSF | |
| Room | see LSF | |
| Start Date | see LSF | |
| Lecturer | Name | Prof. Dr. Michael Paetsch, Ph.D. |
| | Office | W2.3.13 |
| | Virtual Office | Link will be sent by e-mail |
| | Colloquium | see LSF |
| | Phone | +49 7231 28 6075 (secretary) |
| | Email | michael.paetsch@hs-pforzheim.de |

Summary

The Python course is extremely "beginner-friendly". No knowledge of a programming language is required. Through interactive exercises, participants will be able to programme their first Python programs themselves.

Outline of the Course

What is Python and why is it useful?

Python basic knowledge (the 1x1 of a programs)

Python data structures

Python Programming Basics

Python - Playing with data

Outlook - Marketing, Data & Python

Course Intended Learning Outcomes and their Contribution to Program Intended Learning Outcomes / Program Goals

| Program Intended Learning Outcomes | | Course Intended Learning Outcomes | Assessment Method |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| After completion of the program the students will be able... | | After completion of the course the students will be able... | Essay |
| | | | 100% |
| | | | Individual |
| 1 Expert Knowledge | | | |
| 1.1 | ...to demonstrate their distinguished and sound competencies in General Business Administration. | ...to carry out programming of business management tasks. | x |
| 2 Digital Skills | | | |
| 2.1 | ...to know and understand relevant IT software tools used in business and their features and have a solid understanding of digital technologies. | ...have an understanding of the programming language and, in addition, of the programming procedure, in particular the importance of interfaces, for example to CRM, web analytics tools etc.. | x |
| 2.2 | ...to effectively use and apply information systems to develop solutions in business settings. | ...to solve simple to medium data problems using programming. | x |
| 2.3 | ...to effectively use digital technologies to interact, to collaborate and to communicate. | ...to exchange ideas with programmers systematically and precisely in later professional life. | x |
| 2.4 | ...to handle the professional use of digital technologies in a responsible manner. | ...to communicate responsibly and professionally via digital technologies. | x |
| 3 Critical Thinking and Analytical Competence | | | |
| 4 Ethical Awareness | | | |
| 5 Communication and Collaboration Skills | | | |
| 6 Internationalization | | | |
| 6.1 | ...to understand and explain business challenges in an international context. | ...to understand and demonstrate business contexts in an international context. | x |
| 6.2 | ...to articulate themselves in a professional manner in international business. | ...to express themselves professionally in international business. | x |

Teaching and Learning Approach

Through interactive exercises, the participants are enabled to program their first Python programs themselves and to solve business tasks.

Literature and Course Materials

References to literature are given in the respective documents of the courses.

Assessment

The method of assessment is a program assignment at the end of the semester (100% of the overall grade).

The grading is as follows:

| | |
|----------------------|--------------------------------------------------------------------------------------------|
| „Sehr gut“ (1.0) | Very good, a performance significantly above the average |
| „Gut“ (2.0) | Good, an above average performance |
| „Befriedigend“ (3.0) | Satisfactory, average performance, which is deficient but basically meets the requirements |
| „Ausreichend“ (4.0) | Adequate, a below average performance with noticeable shortcomings |
| „Mangelhaft“ (5.0) | Fail, an unacceptable performance |

Code of Conduct for online Teaching

[Link to the Code of Conduct for online Teaching](#)