

Module title Scientific Computing with Python				
Module code YSPP	Level Bachelor (B.Sc.) IN, IM, IW, MA	Hours per week 4	ECTS credits 5	Duration 2 weeks block course + virtual lectures
Module instructor Kamini Garg, University of Applied Sciences and Arts of Southern Switzerland		Lecture type Regular lecture, on line consultations	Prerequisite(s) Basic knowledge of Mathematics	Grading Homework and project work
Objectives This course aims to provide an introduction to programming using Python. Students will learn the fundamentals of Python, handle different data types and data visualization using Python. More importantly, this course will stimulate students to develop a computational thinking.				
Content 1. Onsite Lectures: Basics of Python, Data structures in Python, Python Modules, Working with Text and CSV Files, Data analysis using Numpy and Pandas, Scrapping of Web Data, Scientific Computing with SciPy and Plotting in Python using Matplotlib. 2. Online Course project In this part of the course, students will work on individual projects. Progress of project will be evaluated based on the milestones provided by lecturer. Further, online discussion and session can also be arranged with lecturer.				
Textbook/teaching material <input type="checkbox"/> No prescribed text. Recommended reading lists will be provided. <input type="checkbox"/> Lecturer provided materials on e-learning platform.				

Note: this is not the official course descriptor according to the "Studien- und Prüfungsordnung" (SPO)