

Module title Applied Data Science with Python			
Module code tbd	Level Bachelor (B.Sc.)	ECTS credits 5	Duration block course + virtual lectures
Module instructor Dr. Kamini Garg, Lead Data Scientist, UPC Schweiz	Lecture type Guided tutorial sessions	Prerequisite(s) Basic knowledge of Mathematics and Computer programming	Grading Final project + presentation
Objectives This course aims to provide an introduction to data science with the help of real-world examples using Python. Students will learn the fundamentals of Python, the concept of data analysis, machine learning, and the introduction of end-to-end pipelines for real-world data science product deployment. By the end of this course students would be able to perform data analysis and modeling using python. The course will also serve as the building block for a career in data science			
Content 1. Online Lectures: (a) Python Basics: Data Structures, Conditions and Branching, Loops, Pandas, basics of Visualization (b) Data Science: Data Analysis, Data Cleaning, Machine learning (supervised and Unsupervised), Model evaluation 2. Online Course project: In this part of the course, students will work on a data science problem independently. Progress of the project will be evaluated based on the solution code, presentation and report.			
Textbook/software To be announced			

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