

Syllabus: Python Programming for Data Science TU Berlin Summer University 2020 Term 4

Week 1 August 17th- 21st

	17	18	19	20	21
	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 - 10:30	Welcome Day! Orientation and 1 st session (2h)	Python Basics	Python Advanced	Numpy	Pandas
11:00 - 12:30		Python Basics	Exercise 2	Matplotlib	Exercise 4
13:30 - 15:30		Exercise 1	Cultural Program	Exercise 3	Recap/ Introduction
16:00 +					Cultural Program

Week 2 August 24th- 28th

	24	25	26	27	28
	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 - 10:30	Intro ML	Exercise ML2	Project	Exam	Exam Review
11:00 - 12:30	Exercise ML1	Exercise ML2	Project	Expert Talk	Feedback Session
13:30 - 15:30	Project	Project	Cultural Program		
16:00 +	Cultural Program				

Key

Lecture	Field Trip or Practical	Assessment	Cultural Program activity*
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*The cultural program timetable will be emailed to you shortly before your course starts. For more information about the cultural program, and for examples of previous schedules, head here:

https://www.tu-berlin.de/menue/summer_university/cultural_program/

Assessment information

You will be assessed in the following ways (see yellow sessions in schedule, if applicable):

- Exam
- Project
- Participation

Your assessments will be weighted as follows:

- Exam 50%
- Project 40%
- Participation 10%

Grading information

All participants of the TU Berlin Summer & Winter University are required to select their grading option at the time of registration. The two options available are (i) graded or (ii) pass/fail.

All participants who select option (i) graded, will receive a grade under the German grading system. The following table provides an overview of the grading system and equivalent scores for international credit transfers:

Total mark	German grade	English description
More or equal to 95	1,0	Excellent
More or equal to 90	1,3	Very good
More or equal to 85	1,7	Good
More or equal to 80	2,0	Good
More or equal to 75	2,3	Good
More or equal to 70	2,7	Satisfactory
More or equal to 65	3,0	Satisfactory
More or equal to 60	3,3	Satisfactory
More or equal to 55	3,7	Sufficient
More or equal to 50	4,0	Sufficient
Less than 50	5,0	Failed

Credit Points

ECTS is a point system and European standard developed by the Commission of the European Community. ECTS stands for European Credit Transfer System. The aim is to provide common procedures and guarantee academic recognition of studies abroad. The credit system is based on student workload. All lectures, seminars, excursions and homework count towards the workload. One point is awarded for the equivalent of 25-30 hours of workload.

Reading list

All sources below are available either open source, in the TU Berlin library, or will be provided to you directly by your lecturers, during the course.

To search resources available in the TU Berlin library, check here: <https://www.ub.tu-berlin.de/en/searching-for-resources/>

1. Google Python Class on Youtube (<https://youtu.be/tKTZoB2Vjuk>)
2. Müller, Andreas C., and Sarah Guido. Introduction to machine learning with Python: a guide for data scientists. "O'Reilly Media, Inc.", 2016.
3. Raschka, Sebastian, and Vahid Mirjalili. Python machine learning. Packt Publishing Ltd, 2017.
4. Grus, Joel. Data science from scratch: first principles with python. "O'Reilly Media, Inc.", 2015.
5. <https://www.w3schools.com/python/>