

Python for Scientific Computations and Control

Subject area: Computer Science/ICT

University:	CTU
Level:	BA1, BA2, BA3, BA all years
Teaching mode:	hybrid: some students participate online, other students attend real-life
Instructor(s):	Cejnek Matouš, Oswald Cyril, Peichl Adam

Short description

Scientific computations and processing of online measured data in programming environment Python, communication with connected devices, saving and visualization of online measured data into PC using Python in real time, libraries, programming the common tasks of numerical mathematics in Python, programming graphic user interfaces, visualization, demonstration of solved problems. Classification upon the individually solved class projects.

Full description

<https://github.com/CVUT-FS-12110/Python/blob/master/course-E375004.md>

Learning outcomes

Control engineering methods in Python, practical skills in computer-aided control design and visualization, Python as a platform of control engineers

General information

Contact hours per week:	Lectures 2 hours + Tutorials: 2 hours
Total workload:	100 (in student hours for the whole course)
ECTS credits:	4
Language:	English
Course start date:	19 September 2022
Course end date:	15 January 2023

Add. info about start date: Start course date refers to start of the semester at CTU. Schedules will be available 1-2 weeks before semester starts. Lectures are taken place from 19.9.2022 until 15.1.2023. Examination period from 16.1.2023 until 19.2.2023.

Weekly teaching day/time:

Time zone: CET (Denmark, Germany, France, Netherlands, Switzerland, Czech Republic)

Further information: Archive on recorded lectures will available on MS-Teams

Prerequisites: none

Activities and methods: Lectures, Tutorial sessions

Presence on campus:

Final examination

Form: assignment and project

Date:

Location/format:

Re-sit possibility:

Transcript available: end of semester

Add. info/requirements:

Registration

To register for this course, follow the registration requirements of your **home university** as specified here: www.euroteq.eu/courses-registration.

Administration

Number of places: 25

Minimum participants: -

Internal course code: E375004

Contact: matous.cejnek@fs.cvut.cz

This course is part of the EuroTeQ Engineering University joint course catalogue 2022/2023. This is a collaborative activity of the partner universities DTU, L'X, TU/e, TalTech, CTU, TUM as well as Technion. Students from these universities can participate in the offered courses. It is the responsibility of the student to check if you fulfil the requirements to participate in a specific course. Students are also advised to check with their home institution how to get recognition of the ECTS credits gained in courses of the EuroTeQ course catalogue. For further information about EuroTeQ Engineering University, visit www.euroteq.eu or get in touch with the above-mentioned point of contact.