

BIOENG-601

Python Bootcamp

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Cursus	Sem.	Type
Biotechnology and Bioengineering		Opt.
Computational and Quantitative Biology		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Multiple
Workload	60h
Hours	40
Lecture	20
Exercises	20
Number of positions	25

Frequency

Every year

Remark

Next time: Fall 2023

Summary

An intensive, hands-on, pragmatic introduction to computer programming. Students learn basic concepts like data types, control structures, string processing, functions, input/output. They perform simulations, write scripts, and analyze and plot biological data. Python is the language of instruction.

Content

Greetings doctoral students and postdoctoral fellows in the biological sciences! Addressing the big questions in biology increasingly requires help from computers. We are therefore excited to offer a Caltech course for graduate students, BE/Bi/NB 203: Introduction to Programming for the Biological Sciences Bootcamp - for the third time at EPFL!

Our aim is to bring you up to speed with programming skills that you can immediately put to use in your research.

Because intensive, hands on training is a great way to learn practical skills efficiently, we are offering this course as a weeklong summer bootcamp. All you need to bring is yourself, your laptop, and a power supply. A typical day in the bootcamp is as follows:

8-noon (with 15 minute break in the middle): Hands-on instruction

noon-1: Lunch with research talk from EPFL faculty highlighting use of computation in biology

1-6 (with a 15 minute break in the middle): Hands-on instruction followed by exercise session

You can check out the Caltech version of the bootcamp here: <http://justinbois.github.io/bootcamp/>

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This course is for biology Postdocs and PhD students who want to use Python programming in their work.

Requirements: Students should bring their own laptop for Python installation.

Minimum 13 participants

Maximum 40 participants

Note**REGISTRATIONS:**

Please imperatively contact edbb@epfl.ch confirming your commitment to follow the full duration of the course.

We will register you in IS-Academia on a first come first served basis, based on date and time of your email. Those of you who need to receive prior approval from your program, please copy edbb@epfl.ch in your email to your program administrator, so I can place you in order of priority based on your initial email date and time. Then kindly reconfirm your availability once your program gives you a green light.

Learning Outcomes

By the end of the course, the student must be able to:

- Use python to analyze biological datasets

Resources

Websites

- <http://justinbois.github.io/bootcamp/>